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Conference Partners

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ASSOCIATION OF MATERNAL & CHILD HEALTH PROGRAMS

THE LAWTON AND RHEA CHILES CENTER FOR HEALTHY MOTHERS AND BABIES

ASTHO

Council of State and Territorial Epidemiologists

CityMatCH

U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration

NACCHO NATIONAL ASSOCIATION OF COUNTY & CITY HEALTH OFFICIALS

reproduction — pregnancy — childhood health — fetal development
SOCIETY FOR PEDIATRIC AND PERINATAL
SPER
EPIDEMIOLOGIC RESEARCH

March of Dimes
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Program Highlights

Program At-A-Glance
Provides a quick overview of the entire program with room assignments.

Program Booklet
A detailed guide to the conference activities and abstracts of most sessions. Participant contact information has been printed as a separate publication and may be found in your registration packet.

Plenary Sessions
The plenary sessions for all participants focus on different aspects of Maternal and Child Health (MCH). All plenary sessions are held in the Hopi Ballroom.

Breakout Sessions
The concurrent, classroom-style sessions are smaller in size and highlight various MCH topics. There will be opportunities to discuss each presentation as well as establishing or improving partnerships. Please consult each day's agenda for the topics.

Student Networking Session
Students are encouraged to network with MCH Leaders on Tuesday, December 9th from 5:30pm – 6:00pm in Kachina 2.

Training Sessions
Valuable training sessions are choices for breakouts. Seating will be limited to , "first come, first serve." You will want to arrive early.

Poster Sessions
This is a great opportunity to leisurely browse visual displays of MCH epidemiology work and talk directly with the author. The poster presentations will be available on Wednesday, December 10th from 12:00pm – 2:00pm during lunch, which is on your own. Posters are available for viewing from noon on Wednesday through noon on Friday.

Recreational Activities
The Tempe/Scottsdale/Phoenix metropolitan area offers great opportunities for fun. A tourist guide has been included with your registration packet to help you find things to do after hours. For additional assistance, please visit the hotel's concierge desk.

Awards Presentation
Join the Coalition for the Excellence in MCH Epidemiology as they present the 2003 awards celebrating this year's top achievements to improve the health of women and children. The awards will be presented during this year's Plenary Sessions Wednesday and Thursday, December 11th and 12th.

And don't forget to stay until the end of the conference to see your colleagues receive this year's MCH EPI conference awards. These presentations will be made during the closing Plenary session on Friday morning, December 12th, from 10:30am-12:00pm.

Job Board
If you would like to post a list of open positions at your agency or discover what positions are available, don't forget to stop by the designated Job Board during the poster session.

Conference Information

Registration and Information
Registration will be open during the following hours in the Conference Center Foyer:

Tuesday, December 9, 2003	4:30pm – 7:00pm
Wednesday, December 10, 2003	7:00am – 4:00pm
Thursday, December 11, 2003	7:00am – 4:00pm
Friday, December 12, 2003	7:00am – 12:00pm

Conference Accreditation
Certificates of Attendance will be provided on site: CE certificates will be mailed 6-8 weeks following the conference. Please bring license numbers with you.

Physicians: This activity has been planned and implemented in accordance with the Essential Areas and Policies of Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the University for South Florida College of Medicine and National Center for Chronic Disease Prevention and Health Promotion. The University of South Florida College of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

The University of South Florida College of Medicine designates this education activity for a maximum of 16 category 1 credits toward the AMA Physicians Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

Florida Board of Nursing: The University of South Florida College of Public Health is a Florida Board of Nursing approved provider (FBN 3067) of continuing nursing education. This program meets the Board of Nursing requirement for up to 19, 50-minute contact hours. You must bring your nursing license number with you.

Evaluation Forms
Conference organizers are requesting that ALL participants take a few moments to complete the evaluation forms that are in your conference packet and turn them in at the end of the conference. Your feedback is important to planning future conferences.

Conference Goals and Objectives
The overall goal of the 9th annual MCH EPI Conference is to offer Maternal and Child Health (MCH) professionals the opportunity to exchange experiences with peers, learn from experts in the field and replenish their passion to improve the health of women, children, and infants. Through the interchange of best practices, with a shared vision and commitment to collectively direct the field, MCH professionals will learn how to use data to effectively and efficiently impact the lives of women, children and families. Conference discussion will focus on ways to go from data collection to program delivery with the appropriate individuals working together.

At the completion of the conference, participants will be able to:

- Discuss the importance of collaboration between public health professionals who work with MCH data, program and policies and explain how this alliance impacts women, children and families
- Describe MCH issues that are both similar and unique to the Southwest region
- Generate solutions for the unique challenges faced by special needs children as they transition into adulthood
- List at least two definitions of Maternal and Child Health Epidemiology (MCH EPI) as it relates to the scientific and programmatic work done in states and determine the implications of establishing a common definition.
- List at least three new professional contacts established through formal and informal net working, as potential collaborators on current or future projects that impact women, children and families.

Program At-A-Glance

Monday, December 8, 2003 – Pre-Meetings

8:00am – 5:00pm	AMCHP Meeting (invitation only)	Kachina 3
8:00am – 5:00pm	CDC Staff Meeting (invitation only)	Pima

Tuesday, December 9, 2003 – Pre-Meetings

8:30am – 5:00pm	AMCHP Meeting (invitation only)	Kachina 3
8:00am – 5:00pm	CityMatCH Meeting (invitation only)	Papago
8:00am – 12:00pm	CDC Staff Meeting (invitation only)	Pima
12:00pm – 2:30pm	National Action Alliance Meeting (invitation only)	Pima
3:00pm – 6:00pm	Partners Meeting (invitation only)	Amphitheater
6:30pm – 8:30pm	Abstract Reviewer Meeting (invitation only)	Pima
4:30pm – 7:00pm	Poster Set Up	Hopi Ballroom I and II

Program At-A-Glance

Wednesday, December 10, 2003

8:00am – 9:30am	**Plenary Session I** **Public Health in the Southwest: Successes and Challenges in Maternal and Child Health**	**Hopi Ballroom**
9:30am – 10:00am	**Break**	
10:00am – 11:30am	**Concurrent Session A**	
	A1. Unintended Pregnancy Prevention, Influences, Decisions	**Amphitheater**
	A2. Social and Environmental Determinants of Health	**Kachina 2**
	A3. Racial Disparities in Women, Children and Infant Health	**Kachina 4**
	A4. Maternal Morbidity: Measurement and Outcomes	**Kachina 1**
	A5. Child and Adolescent Health: Strides Made and Future Directions	**Kachina 5**
	A6. Using Surveys for MCH Research	**Kachina 6**
	A7. Strategies for Strengthening State-Local Collaboration through PPOR Implementation	**Kachina 3**
11:30am – 2:00pm	**Lunch (on your own)**	
12:00pm – 2:00pm	**Poster Session and Networking**	**Hopi Ballroom**
2:00pm –– 3:30pm	**Concurrent Session B**	
	B1. Improving Access to Health Care	**Kachina 6**
	B2. Innovative Approaches In Data Use	**Kachina 3**
	B3. Maternal Experience Before, During and After Pregnancy: Findings from PRAMS	**Amphitheater**
	B4. Maternal Morality: The Importance of a Surveillance System	**Kachina 4**
	B5. Domestic Violence-Prevention and Assessment	**Kachina 5**
	B6. Maternal Child Health Projects Among American Indian and Alaskan Native (AIAN) Communities	**Kachina 1**
	B7. Advancing HIV Prevention in the US	**Kachina 2**
3:30pm – 4:00pm	**Break**	
4:00pm – 5:30pm	**Plenary Session II** **Preterm Delivery Initiative**	**Hopi Ballroom**

Program At-A-Glance

Thursday, December 11, 2003

8:00am –– 9:30am	**Concurrent Session C**		
	C1.	Improving the Mental Health of Women: Recognition and Treatment Of Depression	**Kachina 5**
	C2.	Oral Health: Access And Care	**Kachina 2**
	C3.	Pre-Term Births: Indicators, Intervention and Cost	**Kachina 4**
	C4.	Injuries During Pregnancy: Understanding And Tracking the Hidden Epidemic	**Amphitheater**
	C5.	Program and Policy Uses of YRBS	**Kachina 6**
	C6.	Addressing Women's Health Issues at the Local Level	**Kachina 1**
9:30am – 10:00am	**Break**		
10:00am – 11:30pm	**Plenary Session III** **What is MCH EPI**		**Hopi Ballroom**
11:30pm – 2:00pm	**Lunch (on your own)**		
11:30pm – 1:30pm	**MCH EPI Conference Luau**		**La Hacienda**
2:00pm –– 3:30pm	**Concurrent Session D**		
	D1.	Unintended and Teen Pregnancy Prevention: Research and Practice	**Kachina 1**
	D2.	Use of Contraception: Barriers and Subsequent Consequences	**Kachina 4**
	D3.	Utilization and Adequacy Of Prenatal Care	**Kachina 5**
	D4.	State Investigation into Infant Morality	**Kachina 6**
	D5.	Breast-feeding Initiation	**Kachina 2**
	D6.	Birth Defects Prevention And Monitoring	**Kachina 3**
	D7.	Approaches to Using Data Linkage	**Amphitheater**
3:30pm – 4:00pm	**Break**		
4:00pm – 5:30pm	**Plenary Session IV** **Exploring the Transition of Care from Children to Adults with Special Health Care Needs**		**Hopi Ballroom**
6:30pm – 8:30pm	**CDC Post Planning Meeting (invitation only)**		**Pueblo**

Program At-A-Glance

Friday, December 12, 2003

8:30am –– 10:00am	**Concurrent Session E**		
	E1.	Prenatal Care During Pregnancy: Maternal and Infant Health	**Kachina 4**
	E2.	Data Linkage: Science And Practice	**Kachina 3**
	E3.	HIV/STD: Improving Prevention, Screening, and Birth Outcomes	**Kachina 5**
	E4.	What Does the New Data on Children with Special Health Care Needs Tell Us	**Kachina 1**
	E5.	American-Indian Health: Issues in MCH	**Kachina 2**
	E6.	Risks Factors for Cesarean Sections	**Kachina 6**
	E7.	Associations Between Maternal Characteristics and Infant Outcomes	**Amphitheater**
10:00am – 10:30am	**Break**		
10:30am – 12:00am	**Plenary Session V** **Intergrative Economic Study/Data Design in MCH**		**Hopi Ballroom**
5:00pm – 9:00pm	**City MatCH Meeting (invitation only)**		**Amphitheater**

Saturday, December 13, 2003

8:00am – 12:00pm	**City MatCH Meeting (invitation only)**	**Amphitheater**
8:00am – 12:00pm	**City MatCH Meeting (invitation only)**	**Pima**

Disclosures

Angela Ablorh-Odjidja	
Meena R. Abraham	Nothing to disclose
Juan Acuña	Nothing to disclose
Aimee Afable-Munsuz	Nothing to disclose
Oluwatoyin Akinpelu	Nothing to disclose
Denise R. Allen	
Walker Armfield	Nothing to disclose
Stephen J. Bacak	Nothing to disclose
Peggy Bailey	Nothing to disclose
Melissa Baker	CDC grant
Laurie Baksh	CDC grant
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Ilyene Barsky	
Karen Bell	Nothing to disclose
Diana Bensyl	Nothing to disclose
Lois Bloebaum	Nothing to disclose
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Lawrence J Cook	
Catherine Cubbin	Nothing to disclose
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Michael P. Curtis	Nothing to disclose
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Denise D'Angelo	Nothing to disclose
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George Delavan	Nothing to disclose
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Jodi Drisko	Nothing to disclose
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Disclosures

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Lisa R. Fortuna	
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Denise Giles	Nothing to disclose
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Violanda Grigorescu	Nothing to disclose
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Ellen Hutchins	
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Barbara Jackson	Nothing to disclose
Pamela L. Johnson	Nothing to disclose
William Johnson	
Jianli Kan	Nothing to disclose
Debra Kane	Sigma Theta Tau International & MCHB
Sarojini Kanotra	Nothing to disclose
Marilyn J. Kennedy	
Cynthia Kent Childs	Nothing to disclose
Russ Kirby	He will mention the software used in the study
Michael Kogan	Nothing to disclose
Ranjitha Krishna	Nothing to disclose
Charlan Kroelinger	
Carrie Kuehn	Nothing to disclose
Steven Lamm	
Stacy Laswell	Nothing to disclose
Jane Lazar	Nothing to disclose
Jennifer Legardy	Nothing to disclose
Qing Li	Nothing to disclose
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Tsai Mei Lin	Nothing to disclose
Leslie Lipscomb	Nothing to disclose
Jihong Liu	Nothing to disclose
Mariel Lopez-Valentin	Nothing to disclose
Changxing Ma	Nothing to disclose
Andrea MacKay	Nothing to disclose
Judith L. Major	Nothing to disclose
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Patricia Ryder	Nothing to disclose
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Tanya Telfair Sharpe	Nothing to disclose
Daniel R. Thompson	Nothing to disclose
Kay M. Tomashek	
Evelyn Torres-Rodriquez	Nothing to disclose
Tri Tran	Nothing to disclose
Stephanie Ventura	Nothing to disclose
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Teresa Vollan	Nothing to disclose
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Jonathan Wallace	
Zipora Weinbaum	
Harold (Hank) Weiss	supported by NIJ and CDC grant
Greg Welch	Nothing to disclose

Disclosures

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J. Daniel Welsh	Nothing to disclose
Ssu Weng	Nothing to disclose
Ellen Wilcox	
Whitney P. Witt	Nothing to disclose
Terri L. Wooten	Nothing to disclose
Victoria Wright	Nothing to disclose
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Li Yan	Nothing to disclose
Huaide Ye	
Erik Zabel	CDC grant
Guoyan Zhang	
Bao-Ping Zhu	Nothing to disclose
Marianne E Zotti	

2003 National MCH Epidemiology Awards

Sponsored by
The Coalition for Excellence in MCH Epidemiology

The National MCH Epidemiology Awards recognize individuals, institutions and leaders for making significant contributions to improve the health of women, children and families by:

1) Improving public health knowledge through MCH epidemiology and applied research,
2) Improving public health practice through effective use of MCH data and epidemiology, and
3) Enhancing the political will to advance public health knowledge and practice through the effective use of MCH data, epidemiology and applied research.

No one national organization represents the field of MCH Epidemiology research and practice. Many organizations include researchers and practitioners in their membership and recognize their contribution to the Maternal and Child Health field. To provide national recognition for the excellent work that has contributed to improving the health of this precious population, 14 national health organizations sponsored the 2003 National MCH Epidemiology Awards under the auspices of the Coalition for Excellence in MCH Epidemiology:

American Academy of Pediatrics (AAP), Epidemiology Section
American Public Health Association (APHA), Maternal and Child Health Section
Association of Maternal and Child Health Programs (AMCHP)
Association of Schools of Public Health (ASPH), Maternal and Child Health Council
Association of Teachers of Maternal and Child Health (ATMCH)
Centers for Disease Control and Prevention (CDC), Division of Reproductive Health
CityMatCH
Council of State and Territorial Epidemiologists (CSTE)
Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau
Maternal and Child Health Journal
National Association of County and City Health Officials (NACCHO)
National Association of Public Health Statistics and Information Systems (NAPHSIS)
National March of Dimes Birth Defects Foundation
Society for Pediatric and Perinatal Epidemiologic Research

AWARDEES

Advancing Knowledge

—Michael D. Kogan, Ph.D.

Dr. Michael Kogan is well known as a prominent scientific researcher with state and national experience in public health programs. His considerable efforts to advance knowledge in the field of MCH Epidemiology as a researcher, leader and teacher are widely recognized and commendable for their scientific merit, their breadth of impact, and their applied nature. His work on advancing the research on prenatal care has markedly enriched our understanding of this critical health service by contributing to the literature in numerous areas, including the measurement and impact of the content of prenatal care and the association of prenatal care with pediatric outcomes. His leadership and efforts to develop, implement and analyze an impressive number of major national surveys—the National Maternal and Infant Health - Longitudinal Follow-Up Survey, the National Survey of Child Health, the Childhood Immunization Birth Certificate Follow-back Survey, the Early Childhood Longitudinal Study, and the National Survey of Children with Special Health Care Needs—has helped make these crucial MCH-related databases available for needs assessments, research, evaluation and policy development and has spawned myriad research efforts with ever growing impact.

Finally, Dr. Kogan has spearheaded the development of critical grant offerings to assist States in expanding their data capacity. His dedication to building the profession of MCH Epidemiology by initiating programs to support the training of MCH Epidemiologists, including the MCH Epidemiology Doctoral Fellowship Program, State Training in Recent Advances in Statistical Analysis Applied to Health Disparities, and the Pre-MCH Epidemiology Conference Hands-on Training in Epidemiology, helps to ensure that there will be an ongoing cadre of well-prepared MCH practitioners and researchers. These new professionals will support the critical assessment, assurance and policy development efforts that are a fundamental part of MCH at the local, state and national level and will be prepared to meet the research challenges of the future. His accomplishments in all of these areas are truly exemplary and most worthy of our recognition and this award.

AWARDEES




Effective Practice at the Community Level

—Countryside Lead Prevalence Study Team

Myron C. Falken, PhD, MPH; Erik W. Zabel, PhD, MPH; Maureen A. Alms, RN, PHN; and Michele Sonnabend, RN

The successful effort of the Countryside Lead Prevalence Study was a collaborative venture of the Minnesota Department of Health, Local Primary Care Providers, WIC, Countryside Public Health, and the families and children who participated. Dr. Falken, Dr. Zabel, and Ms. Alms from the Minnesota Department of Health and Ms. Sonnabend from Countryside Public Health (a five-county public health agency) lead the effort with funding support from the national, state and local levels. Lead prevalence studies have been conducted with metropolitan populations. However, a comprehensive study of the prevalence of childhood lead levels in a rural population in a scientifically defensible manner helps the public health community set policy for this often neglected area of each of our states. Using a strong scientific methodology, the study's rigorous implementation recruited nearly 80% of the eligible population. The results demonstrated that age-of-housing and public assistance status were key risk factors for lead poisoning and were used to confirm the Statewide Screening Guidelines of the Minnesota Department of Health. The results also prompted action by changing the standard of practice for the care of children in Countryside, a population of 50,000 with approximately 1,500 WIC participants and by developing a much closer working relationship among public health, local health organizations, Medicaid and WIC. This project has made a significant contribution to public health practice in Countryside and serves as a model for similar projects in other states. As such, the Countryside Lead Prevalence Study exemplifies outstanding MCH Epidemiology practice at the community level.

AWARDEES

Effective Practice at the State Level
—Garland H. Land, MPH

For more than three decades, Garland Land has been a major change national agent in the field of health statistics, data management, and dissemination of health information.

His influence has been felt across the spectrum of public health, but nowhere more notably than in the field of maternal and child health. Working within the Missouri Department of Health and Senior Services, Garland Land created and fostered a state health statistics agency, the Missouri Center for Health Information Management and Evaluation, which other states can only hope to emulate. Mr. Land's group mastered the creation and use of record linkages between MCH databases at least a decade before the idea became fashionable. He pioneered the collection of data on maternal smoking during pregnancy through vital statistics, and promoted a series of collaborative projects with NICHD conducting population-based studies of outcomes and risk factors associated with very low birth weight deliveries. Missouri was one of the first states to create maternally-linked pregnancy outcome files. Mr. Land provided leadership for the development of a department wide integrated information system that has brought all the stand alone data systems into a single integrated system. He also pioneered the development of an interactive web application that makes MCH and other data more accessible. The system has been exported to nearly one third of the states.

Without a dedicated health statistics and information administrator and leader like Garland Land, dozens of path-breaking epidemiologic research studies impacting virtually all current MCH issues would not have been possible. For these reasons, Garland Land is truly deserving of national recognition in maternal and child health epidemiology.

AWARDEES

Effective Practice at the National Level

—Larry D. Edmonds, MS

Mr. Larry Edmonds has spent most of his 35 year tenure in public health working directly with state and local health departments. His support for MCH Epidemiology spans a wide spectrum of landmark contributions including establishing the Birth Defects Prevention Network, supporting Nationwide State-Based Birth Defects Surveillance Programs, developing the Centers for Birth Defects Research and Prevention, and assisting States to establish and support birth defects surveillance programs and registries.

Mr. Edmonds has had a productive career consulting with and advising state and local health departments and international health officials on development and implementation of reproductive outcome surveillance and epidemiologic investigation. He has also been heavily involved in research, reviewing and analyzing data collected through the national Birth Defects Monitoring Program (BDMP) and the Metropolitan Atlanta Congenital Defects Program (MACDP) for trends, geographic and temporal clustering, and significant changes in birth defect incidence. Mr. Edmonds has authored/coauthored over 70 publications and received numerous awards in recognition of his high quality performance and products. In 1997 Mr. Edmonds became the project director for the National Birth Defects Research and Prevention Study. This national study is the largest case-control study of birth defects ever conducted with 10 participating Centers and over 15,000 maternal interviews.

In addition, Mr. Edmonds has been a passionate supporter of the integration of the birth defects and MCH programs at the state and national levels. He has pioneered the development and implementation of Birth Defects surveillance and research activities, has partnered with the CDC MCH Epidemiology Program in supporting state assignments and conducting joint site visits, and continues to lead myriad efforts to promote the integration of Birth Defects activities with MCH Programs at the national and state levels. In all of his many endeavors, Dr. Larry Edmonds exemplifies effective practice at the national level.

AWARDEES

Outstanding Leadership

—William M. Sappenfield, MD, MPH

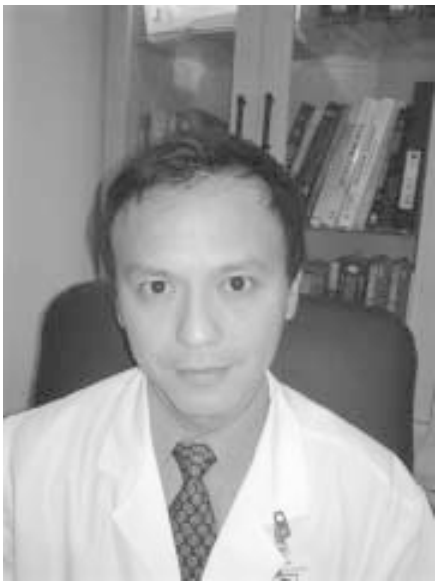
Dr. William Sappenfield's career in public health spans a wide range of experiences and significant contributions, and includes extensive work in both academia and public health practice at the local, state, and national levels. Although a few CDC epidemiologists preceded Dr. Sappenfield as assignees to states in support of MCH programs, he was the first CDC senior epidemiologist to be assigned to a state health department through the MCH Epidemiology Program. Dr. Sappenfield has served as the model MCH Epidemiologist that every state wanted to have. MCH directors told CDC, "We want a Bill Sappenfield," and for very good reasons.

During his tenure at CDC, Dr. Sappenfield served as an MCH epidemiologist developing capacity in 3 states: Massachusetts, Mississippi and South Carolina. In 1997, Dr. Sappenfield was assigned to the University of Nebraska Medical Center to work specifically with CityMatCH to develop the analytic capacity of major urban public health agencies. In 2001, he returned to CDC to head the MCH Epidemiology program and serve as its leader. His many public health accomplishments include co-authoring the first national estimates on the prevalence of children with chronic conditions, pioneering early work on fetal and infant death reviews, developing model state perinatal surveillance systems, estimating the prevalence of drug use during pregnancy, validating and refining the perinatal periods of risk (PPOR) approach to feto-infant mortality, co-developing the CityMatCH Data Use Institute and PPOR Practice Collaborative, and mentoring and teaching many of the currently practicing MCH epidemiologists.

Besides his public health accomplishments, Dr. Sappenfield is an outstanding leader. His passion and hard work together with others have clearly improved the lives of all women and children. He has served as a catalyst, bringing together program, data, and policy staff and leaders, inspiring them to improve their understanding of each other's work and to work together as teams for the benefit of women, children and families. Working with others, his collaborative leadership efforts contributed to forming APHA's MCH Epi and Data Analysis Committee, developing AMCHP's state data contact network, jointly sponsoring HRSA/CDC MCH Epi training, and creating the National Action Alliance.

From the beginning of his career, Dr. Sappenfield has been committed to building the capacity of state and local health, and to the systematic improvement of MCH practice. As a leader and visionary, researcher and public health practitioner, mentor and educator, Dr. Sappenfield's contributions and dedication to the practice of MCH epidemiology are unparalleled.

AWARDEES



Young Professional Achievement
— Michael C. Lu, MD, MPH

Dr. Michael Lu exemplifies the characteristics expected of the recipient of the Young Professional Award in MCH Epidemiology. He is not only a strong and imaginative researcher and a well-respected and influential teacher, but he is also actively involved in using data to shape public policy at both the community and state levels.

In his role as assistant professor of Obstetrics & Gynecology at the UCLA School of Medicine and Assistant Professor of Community Health Sciences at the UCLA School of Public Health, Dr. Lu has focused his efforts on understanding and reducing racial-ethnic disparities in reproductive outcomes. Together with his colleagues, he has proposed a new conceptual framework through which to understand these disparities, a framework which challenges both researchers and practitioners to think beyond the nine months of pregnancy in their search for solutions to the increased risk of adverse reproductive outcomes for women of color. By emphasizing a life course perspective, Dr. Lu suggests that both our research and practice should focus increasingly on women's health across the lifespan and should lead to greater investments in community health.

Dr. Lu's commitment to turning his conceptual approach into action has led him to serve on several commissions and advisory committees related to improving the health of women and children. This includes acting as Co-PI for the Los Angeles Best Babies Collaborative, a countywide collaboration of practitioners and community organizations funded by Proposition 10 to develop a comprehensive and coordinated plan for improving reproductive and perinatal health services in Los Angeles. He is also currently working with the California MCH Branch on developing performance monitoring for the quality of maternal health care in California.

Dr. Lu is well on his way to becoming an influential MCH Epidemiology leader as a result of both his academic as well as practice efforts to improve reproductive and perinatal outcomes, particularly for low income women and women of color.

FEATURED SPEAKERS

Naomi Kistin, MD, MPH

Public Health Physician, Public Health Division, New Mexico Department of Health

From New Mexico, Dr. Kistin is a public health physician and faculty member at the University of New Mexico, School of Medicine, Department of Family and Community Medicine. A pediatrician, Dr. Kistin provides direct public health clinical services in the Albuquerque area as well as mentors community programs, public health and medical students and post-graduate students. Her public health and research interests include social justice in public health training curricula, effective processes for group work, breastfeeding, and the effects of cocaine on neonates. Consultations with community programs have included doula programs and collaboration with university programs. There are many needs for MCH education in the Southwest; Dr. Kistin is a member of the Rocky Mountain MCH Collaborative that unites the 4-corner states in a strategy to offer MCH courses to MPH program candidates; at the UNM's MPH program she co-teaches a course on Issues in MCH and taught a course on Women's Health.

Joyce Naseyowma-Chalan, MPH

Director, Public Health Division, New Mexico Department of Health

From New Mexico, Joyce Naseyowma-Chalan is the Director of the Public Health Division of the New Mexico Department of Health where she provides leadership and directs the statewide agency with its 7 large bureaus and 4 regional public health districts that are home to 57 local health offices, and a statewide budget of over $160 million. She is responsible for the Public Health Division's leadership with the many Native American communities in New Mexico as well. Prior to her appointment with the New Mexico Department of Health, Joyce was with the Albuquerque Area Indian Health Board for 17 years where she served as its Executive Director, and as a member of its staff she administered and managed the behavioral health programs that focused on such critical issues as Indian child counseling, diabetes, HIV/AIDS, substance abuse, and intimate partner violence. Joyce has been an active leader and mentor in national and state organizations that seek to bridge tribal health with state and national health agencies, and that seek to improve the health of Native American women, children and families.

Mary Ellen Rimza, MD, FAAP

Director of Health, Arizona State University
Professor of Pediatrics, Mayo Graduate School of Medicine and University of Arizona College of Medicine

Dr. Mary Rimsza is board certified in both Pediatrics and sub-board certified in Adolescent Medicine. She received her AB degree from Wasington University in St. Louis and her MD degree from Hahnemann Medical College. She is Director of Health at Arizona State University and Professor of Pediatrics, Mayo Graduate School of Medicine and University of Arizona College of Medicine. She also serves as Medical Director, Phoenix Job Corps, is editor of the Pediatric Review and Education Program Self Assessment Program for the American Academy of Pediatrics. She serves on the Board of Directors of the Arizona Medical Association and is past president of the Arizona Chapter, American Academy of Pediatrics and Phoenix Pediatric Society. She has served as chairman of the Arizona State Child Fatality Review Program since its inception in 1993.

FEATURED SPEAKERS

Michael S. Clement, MD

Consultant, Arizona Department of Health Services; Consultant, Arizona Perinatal Trust Pediatrician, Mountain Park Health Center

Dr. Clement has been an Assistant Director at ADHS and a county health officer. He has written and spoken on perinatal health in Arizona, including maternal morbidity and mortality, perinatal periods of risk, infant mortality, prematurity/low birth weight and perinatal transport. Dr. Clement is active in the March of Dimes, Children's Action Alliance and professional associations.

Miguel A. Escobedo, MD, MPH

Regional Director, Public Health Regions 9 and 10, Texas Department of Health

Dr. Escobedo is currently the Regional Public Health Director for the Texas Department of Health. His TDH region covers 36 counties in west Texas. He is a graduate of Stanford Medical School and the University of California Berkeley School of Public Health. He completed a Family Practice Residency Program at Texas Tech and is a Diplomate of the American Board of Family Practice. His research interests include Tuberculosis and Border Health Issues. He has published numerous articles in Public Health and Primary Care Journals. Dr. Escobedo has also served as Advisory Council for TB Elimination – CDC, served on the Council of Public Health - Texas Medical Association and was previously a Tuberculosis Control Officer at the El Paso City-County Health District.

Jesse Richardson Hood, MPH

Public Health Advisor, Division of Reproductive Health, Centers for Disease Control and Prevention

Jessie Richardson Hood completed her masters of public health (MPH) in health administration and policy at the Morehouse School of Medicine in Atlanta, Georgia. As a fellow with the Division of Reproductive Health at the Centers for Disease Control and Prevention (CDC), Jessie worked to facilitate the implementation of new policy initiatives designed to reduce racial and ethnic disparities in preterm delivery. Jessie also coordinated a variety of program and policy initiatives for women and children at CDC. Currently, Jessie is pursuing doctoral studies in health and social policy at the Harvard University School of Public Health in Boston, MA.

Throughout her career, she has worked to improve health outcomes at the federal, state and community levels. In addition to many professional affiliations, Jessie is active in various community organizations and married to Joseph Hood, Jr.

FEATURED SPEAKERS

Nancy Green, MD

Medical Director, March of Dimes

Dr. Green received her M.D. from Columbia University College of Physicians and Surgeons, and her clinical training in Pediatrics and Pediatric Hematology-Oncology at Columbia-Presbyterian Medical Center. She then trained as a post-doctoral fellow in the Department of Cell Biology at Albert Einstein College of Medicine in NY, and became Associate Professor of Pediatrics and Assistant Professor of Cell Biology. She is board certified in Pediatrics and in Pediatric Hematology/Oncology. In 2000, she came to the March of Dimes and, since 2002, serves as the Medical Director. She is a member of the American Association of Immunology, American Society of Hematology, and the American Academy of Pediatrics and is a former Fulbright Scholar. She has published numerous papers on topics in pediatric hematology, oncology, immunology and genetics. She chairs the March of Dimes External Advisory Committee on Newborn Screening and the Scientific Advisory Committee on Prematurity. She oversees March of Dimes programs in medical and genetics education, science information and perinatal epidemiology, and is co-Principal Investigator of a federally funded grant on genetic literacy. She also serves as the medical expert for a National Genome Center funded project to the Hastings Center on ethical issues in newborn screening, and is an honorary member of the Society for Maternal-Fetal Medicine for 2004.

Carol Brady, MA

Executive Director, Northeast Florida Healthy Start Coalition

Carol Brady is the executive director of the Northeast Florida Healthy Start Coalition which covers Jacksonville and four surrounding counties. The Coalition is responsible for planning and funding services to address the maternal and child health care needs in the region. She is project director for The Magnolia Project, a federal Healthy Start project that provides pre-and interconceptional health care for at-risk women in an effort to reduce infant mortality in the black community. Before taking this post, she served as executive director of Florida Healthy Mothers, Healthy Babies, a statewide maternal/child health advocacy group, for eight years. She has a B.S. in Journalism and Communications and a M.A. in Political Science from the University of Florida. Ms. Brady received the Florida Public Health Association's Excellence in Maternal & Child Health Award in 2001 and the Lawton M. Chiles State Public Affairs Award from the March of Dimes in 2002.

FEATURED SPEAKERS

Peter C. van Dyck, MS, MD, MPH

Associate Administrator for Maternal and Child Health
Health Resources and Services Administration
U.S. Department of Health and Human Services

Dr. van Dyck was appointed associate administrator for Maternal and Child Health, Health Resources and Services Administration (HRSA), Department of Health and Human Services on August 17, 1999, after serving as acting associate administrator from August 3, 1998. He is responsible for an $842 million program, which when combined with state partnership funds is nearly $4 billion, charged with promoting and improving the health of mothers, children, and families, particularly those who are poor or lack access to care. HRSA's Maternal and Child Health Bureau administers the Maternal and Child Health Services Block Grants to the States, the Healthy Start Initiative, the Traumatic Brain Injury and the Emergency Medical Services for Children Program and the Abstinence Education Program.

Before this appointment Dr. van Dyck served as the first permanent director of MCHB's Office of the State and Community Health, which was created in 1995 to be more responsive to state issues related to the MCHB block grant. In this position, he provided guidance to states, established reporting requirements, coordinated technical assistance and developed national information and data systems. Prior to that, he was senior medical advisor to the MCHB and HRSA directors for four years.

Before coming to the federal government in 1992, Dr. van Dyck was the Director of the Family Health Services Division of the Utah Department of Health and a Professor of Pediatrics at the University of Utah Medical Center. He has consulted widely both nationally and internationally, chaired numerous national committees, and been President of the Association of Maternal and Child Health Directors and Chair of the Maternal and Child Health Section of the American Public Health Association.

He has won numerous awards including outstanding young MCH professional in the nation and one of America's 500 most influential health policy makers. He was the winner of a WHO fellowship and was awarded the Secretary's Award for Distinguished Service in 1998 for his work. In 1999, he was awarded the prestigious Arthur Flemming Award for his administrative accomplishments, the only award given to federal employees by the private sector. He is currently the executive secretary of the Secretary's Advisory Committee on Infant Mortality.

Dr. van Dyck earned a master of science degree in physiology and a medical degree from the University of Illinois Medical Center, Chicago, and a master of public health degree in maternal and child health from the University of California, Berkeley.

FEATURED SPEAKERS

William Sappenfield, MD, MPH

Maternal and Child Health Epidemiology Program Team Leader, Division of Reproductive Health, Centers for Disease Control and Prevention

As both a pediatrician and an epidemiologist, Dr. Bill Sappenfield has more than 19 years of experience in epidemiological research and practice at a local, state and national level in maternal and child health. As a nationally recognized leader, Dr. Sappenfield serves as the Team Leader of CDC's MCH Epidemiology Program. This important U.S. field program assists state and urban public health agencies in strengthening their MCH epidemiology and data capacity. Program activities include: 1) recruiting and mentoring MCH epidemiologists in public health agencies including the assignment of career CDC epidemiologists to public health agencies, 2) developing and training public health professionals through graduate and continuing education programs and field-based training fellowships, 3) providing peer exchange opportunities through national and regional conferences, monthly web casts, Internet opportunities and peer-review publications, and 4) collaborating with other national partners interested in developing MCH epidemiology and data-related capacity in state and local public health agencies. Dr. Sappenfield serves as CDC's senior field MCH epidemiologist using data as a public health tool to improve the health of women, children and families.

Arden Handler, DrPH

Professor of Community Health Sciences/Maternal and Child Health (MCH), School of Public Health, University of Alabama

Arden Handler, DrPH is Professor of Community Health Sciences/Maternal and Child Health, University of Illinois School of Public Health. Dr. Handler has been a leader in fostering the development of MCH Epidemiology from the academic side, serving as the Principal Investigator for EASP/DEAL-MCH, a program to enhance the analytic skills of MCH professionals, as well as the PI for the Evaluation of the CDC MCH Epidemiology Program. Based on these efforts, she has authored several articles related to the development of the field of MCH Epidemiology, and was lead editor for *Analytic Methods in Maternal and Child Health.* In her role as ATMCH President and Past-President she has played an active role in the National Action Alliance. In addition, Dr. Handler received the 2000 National MCH Epidemiology Award for Effective Practice at the National Level and serves as Co-Chair for the National MCH Epidemiology Awards. She is currently the Director of the MCH Epidemiology Training Program at the University of Illinois School of Public Health and serves on numerous committees related to improving the practice of MCH through data.

FEATURED SPEAKERS

Greg Alexander, ScD, MPH

Professor and Chair of the Department of Maternal and Child Health, University of Alabama

Dr. Greg R. Alexander, a MCH epidemiologist, received his Master of Public Health degree from the University of South Carolina in 1976 and his Doctor of Science degree from the Department of Maternal and Child Health, School of Hygiene and Public Health, Johns Hopkins University in 1986. He is currently Professor and Chair of the Department of Maternal and Child Health (MCH), School of Public Health, University of Alabama at Birmingham. Dr. Alexander has over 150 published articles, book chapters and invited technical reports, and has had more than 230 abstracts competitively selected for presentation at professional meetings. Prior to entering academia, Dr. Alexander worked in both county and state public health departments. At a state department of public health, he served as a MCH epidemiologist for MCH programs and as a director of biostatistics. Since the early 1990s, Dr. Alexander has served as the director of the MCH Leadership Skills Training Institute, which provides advanced leadership education to the personnel of State Title V agencies. He currently chairs the MCH Council for the Association of School of Public Health and the March of Dimes Perinatal Data Center Advisory Committee. His areas of professional service include: leadership training, program evaluation, needs assessment, performance monitoring, and data analysis.

Deborah Klein Walker, EdD, EdM

Associate Commissioner, Programs and Prevention, Massachusetts Department of Public Health

Dr. Deborah Klein Walker is the Associate Commissioner for Programs and Prevention in the Massachusetts Department of Public Health. She is responsible for programs in maternal and child health, health promotion and disease prevention (including the tobacco control program), primary care and community health programs (including those for substance abuse and HIV/AIDS), minority health, data integration and information systems. Dr. Walker received her B.A. degree magna cum laude and with great distinction from Mount Holyoke College and her Ed.M. and Ed.D. in human development from the Harvard Graduate School of Education. Before assuming her current position, she was Associate Professor in the Departments of Behavioral Sciences and of Maternal and Child Health at the Harvard School of Public Health and a faculty member at the Harvard Graduate School of Education. She has authored many policy and research articles on a wide range of issues in child development, education and measurement, evaluation and public health practice. Dr. Walker is an elected Board Member of the American Public Health Association, a past president of the Association of Maternal and Child Health Programs, and a former chair of the Maternal and Child Health Section of the American Public Health Association. Dr. Walker is currently a member of the Institute of Medicine Committee on Poison Prevention and Control.

FEATURED SPEAKERS

Sarah Santana

Director, Division of Epidemiology, Maricopa County Department of Public Health

Sarah Santana has been the Director of Epidemiology for the Maricopa County Department of Public Health for the last eleven years. She is responsible for both infectious and non-infectious epidemiology in an Arizona county which includes the sixth largest city in the U.S. (Phoenix) and a population of 3,300,000. Her division produces annual MCH health status reports and needs assessments for the county and communities; carries out small area analyses; conducts public health related research including clinical trials; performs epidemiology and statistical functions supportive of maternal and child health activities; and has completed a local PRAMS survey. Ms. Santana has a BS from the University of Massachusetts in Amherst in Political Science, an MPH from the University of Illinois in Chicago, and completed doctoral work in Epidemiology short of dissertation defense at Columbia University in New York. Before assuming her current position, she was Associate Professor at SUNY in NY and a senior researcher at Columbia. She has worked extensively in neighborhood health centers in East Harlem and Chinatown and at MADRE, a humanitarian aid organization. She has conducted research in infant mortality, reproductive epidemiology and infectious disease in Latin America and the Netherlands. She is currently adjunct faculty in the joint MPH/MS program in nursing and public health at Arizona State University/ University of Arizona and at Midwestern University School of Osteopathic Medicine.

José F. Cordero, MD, MPH

Assistant Surgeon General Director, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention

Dr. José F. Cordero is the director of the National Center on Birth Defects and Developmental Disabilities (NCBDDD) in Atlanta, Georgia, and has served in this capacity since the establishment of the center on April 16, 2001. Dr. Cordero has 21 years of experience at the CDC and extensive public health experience in the fields of birth defects, developmental disabilities, and child health.

A native of Puerto Rico, Dr. Cordero obtained his medical degree from the University of Puerto Rico in 1973. He completed residency training in pediatrics at Boston City Hospital and a fellowship in medical genetics at the Massachusetts General Hospital. In 1979, Dr. Cordero obtained a master's in public health from Harvard University and joined the CDC as an Epidemiologic Intelligence Service (EIS) officer. His first assignment as an EIS officer was with the Birth Defects Branch, where he spent more than 15 years working on birth defects, disabilities, and other child health issues. In 1994, Dr. Cordero was appointed deputy director of the National Immunization Program, where he made important and long-lasting contributions in many areas of one of the nation's most successful public health programs.

A former President of the Teratology Society, a professional research society devoted to the prevention of birth defects, Dr. Cordero has promoted the eradication of rubella (German measles), a major cause of birth defects that can be prevented through vaccination. He has also promoted research to determine the causes of birth defects and developmental disabilities, and has promoted efforts to prevent serious birth defects (such as use of folic acid to prevent spina bifida). He is a strong supporter of programs that promote wellness of persons with disabilities.

Dr. Cordero's work has been published in many national and international journals, and he is regularly requested to speak at national and international meetings. He is Assistant Surgeon General of the U. S. Public Health Service and was most recently awarded the Surgeon General's Exemplary Service Medal, the Surgeon General's highest ommissioned Corp award, for his leadership on the "Report of the Surgeon General's Conference on Health Disparities and Mental Retardation."

FEATURED SPEAKERS

John Reiss, PhD

Chief, Division of Policy and Program Affairs, Institute for Child Health Policy; and Associate Professor of Pediatrics and of Health Policy and Epidemiology at the University of Florida, Gainesville, Florida

Over the last 15 years, Dr. Reiss work has focused on facilitating collaborative action among public and private sector organizations at the federal, regional, and state and between families and professionals to improve the organization, financing and delivery of health care for children and youth with special health care needs; and to promote full partnership with families

From 1993 – 2003 he directed a series of MCHB-funded projects which provided training and technical assistance to Title V CSHCN Program staff and other key stakeholders through a yearly CSHCN Leadership Training Institutes, Tri-Regional Meetings, e-mail listservs, and web-based, video and print materials.

Since 1998, a major focus of Dr. Reiss's work has been the transition of youth with special health needs from child-centered (pediatric) to adult-oriented health care. He helped to establish the initial MCHB-funded Health and Ready to Work National Resource Center, and is currently the PI for a five-year NIDRR funded research and training project on transition. In 2003, he was awarded a contract from Florida's Children's Medical Services to develop a training program for CMS staff on health care transition; and a contract from Florida's Developmental Disabilities Council to develop trainings from families and youth. He also serves as moderator of the Transition listserv, an international electronic e-mail discussion group devoted to the issue of health care transition.

Nora Wells

Director of Research and Activities, Family Voices at the Federation for Children with Special Needs

Nora Wells is the parent of three young adult sons, the oldest of whom has cerebral palsy. She works for Family Voices at the Federation for Children with Special Needs in Boston as the Family Voices Director of Data and Research Activities. She has been involved for the past 25 years in activities around the design and delivery of quality family centered health care services for children with special health care needs, in partnership with national, state and local parents and professionals.

FEATURED SPEAKERS

Stephen E. Saunders, MD, MPH

Associate Director, Family Health, Illinois Department of Human Services

Dr. Saunders is currently the Associate Director for Family Health of the Illinois Department of Human Services. In this capacity, he is responsible for planning and directing the State of Illinois- Maternal and Child Health Program. Programs within the Office include the State-s infant mortality reduction initiative, statewide programs in adolescent health, teen parent initiative, Healthy Families Illinois, prenatal care, perinatal care, family planning, pediatric primary care, school health, family nutrition, and WIC. Dr. Saunders is the past President of the Association of Maternal and Child Health Programs. He also serves on numerous statewide committees in the area of maternal and child health, including the Executive Committee of the Illinois Chapter of the American Academy of Pediatrics, Early Childhood Intervention Interagency Coordinating Council, and the Medical Advisory Committee. Dr. Saunders is a Board certified pediatrician and is a member of the American Academy of Pediatrics. He received his medical degree from the University of California and his M.P.H. from Harvard University.

Russell S. Kirby, PhD, MS, FACE

Professor, Department of Maternal and Child Health, School of Public Health, University of Alabama

Dr. Russell Kirby is Professor in the Department of Maternal and Child Health, School of Public Health at the University of Alabama in Birmingham and a Scholar at the Lister Hill Center and the Center for the Advancement of Youth Health. Dr. Kirby received his masters and doctorate in geography and his masters in epidemiology from the University of Wisconsin. His research interests include MCH, perinatal and pediatric epidemiology; public and population health surveillance, data measurement, management and quality in vital statistics; geographic information systems in public health; and program evaluation in MCH and CSHCN. Through out his career in both academia and practice, Dr. Kirby has received award recognition for his contribution to improving the health of women, children and families through effectively integrating research, surveillance and other information sciences into policy, program, and practice.

Scott D. Grosse, PhD

Health Economist, National Center on Birth Defects and Development Disabilities, Centers for Disease Control and Prevention

Scott Grosse has been employed as a health economist at CDC since 1996, currently with the National Center on Birth Defects and Developmental Disabilities. Prior to coming to CDC, he studied and was employed as a population and development economist at the University of Michigan. His research interests include the costs associated with genetic disorders, birth defects, and developmental disabilities and the economic evaluation of screening and prevention interventions.

Wednesday's Agenda – December 10, 2003

8:00am – 9:30am **PLENARY SESSION I** **Hopi Ballroom**

Public Health in the Southwest: Success and Challenges in Maternal Child Health

Welcome
Rose Conner – Assistant Director, Arizona Department of Health, Division of Public Health Services

Moderator
Naomi Kistin – Public Health Physician, Public Health Division, New Mexico Department of Health

Presenters:
Joyce Naseyowma-Chalan – Director Public Health Division, New Mexico Department of Health

Michael Clement – Consultant, Arizona Perinatal Trust, Arizona Department of Health and Services; Pediatrician, Mountain Park Health Center

Mary Rimsza – Director of Health Arizona State University

Miguel Escobedo – Regional Director, Texas Department of Health

9:30am – 10:00am **BREAK**

10:00am – 11:30am **CONCURRENT SESSION A**

A1 **Unintended Pregnancy: Prevention, Influences, Decisions and Outcomes** **Amphitheater**
Moderator: John Santelli

Partner Influence of Women's Perceptions of Pregnancy	Charlan Kroelinger #8
Reducing Unintended Pregnancies: Using PRAMS Data to Examine Missed Public Health	Mary Ellen Simpson #51
Unwanted and Mistimed Pregnancies and Their Association with Shorter Breastfeeding Duration: An Assessment of Bolivia and Uruguay	Carrie Sharpiro-Mendoza #76
Trends in Contraceptive Use Among US High School Students in the 1990s	John Santelli #LB 59

Wednesday's Agenda – December 10, 2003

10:00am – 11:30am **CONCURRENT SESSION A (cont'd)**

A2 **Social and Environmental Determinants of Health** **Kachina 2**
Moderator: Stephanie McDaniel

Primary Language As a Predictor of Birth Outcomes Among Hispanic Teens	Anna Guntzler #56
The Impact of Maternal Mobility Status on Birth Outcomes Among Singleton U.S. Deliveries to U.S. Resident Hispanic/Mexican Mothers, 1995-1998	Martha Slay Wingate #59
Rural Prevalence of Childhood Lead Poisoning in New Mexico	Erik Zabel #LB 11

A3 **Racial Disparities in Women, Children and Infant Health** **Kachina 4**
Moderator: Yvonne Fry

Racial Disparities in Late Fetal Deaths, US - 1995-1998	Wanda Barfield #42
Infant Mortality, PPOR, and Racial Disparities in the Jackson Metro Area	Jamie Slaughter #47
Measuring Socioeconomic Status/Position in Studies of Racial/Ethnic Disparities: Examples of Maternal and Infant Health	Paula Braveman #123
Emergency Departments as a Source of Care for Latino Children in a Border Community	William Johnson #LB 30

A4 **Maternal Morbidity: Measurement and Outcomes** **Kachina 1**
Moderator: Sam Posner

Pregnancy - Associated Hospitalizations in the US - 1991-2000	Stephen Bacak #20
Pregnancy Outcomes in Women in Rheumatoid Arthritis or Ankylosing Spondylitis in WA State	Theresa Vollan #26
Maternal Morbidity Classification System	Pamela Johnson #92
Racial Disparities in Maternal Morbidity in Michigan	Rebecca Malouin #95

Wednesday's Agenda – December 10, 2003

10:00am – 11:30am **CONCURRENT SESSION A (cont'd)**

A5 **Child and Adolescent Health: Strides Made and Future Direction** — **Kachina 5**
Moderator: Deneen Long-White

Smoking Behavior and Dietary Consumption: Do adolescents Who Smoke Eat Less Fruits and Vegetables than Their Non-Smoking Peers?	Cynthia Kent Childs #32
Prescription of Stimulant Medication for Attention-Deficit Hyperactivity Disorder in Utah Children	Ryan Edward Stern #89
Satisfaction with Care: Does it Improve Immunization of Young Children	Ashley Schempf #LB 60

A6 **Using Surveys for MCH Research** — **Kachina 6**
Moderator: Mary Overpeck

State-Level, Population-Based Surveillance on Women's Health: The California Women's Health Survey	Marion Carter #LB 3
Care Coordination and Special Needs Children: Results from the National Survey	Rohini Singh #LB 22
Development of the Colorado Child Health Survey	Jodi Drisko #LB 43

A7 **Strategies for Strengthening State-Local Collaboration Through PPOR Implementation** — **Kachina 3**
Moderator: Magda Peck

Presenters:
Juan Acuna – Lousiana Office of Public, Centers for Disease Control and Prevention
Debra Bara – Health Start Coalition of Pinellas
Karen Hughes – Ohio Department of Health
Magda Peck – CityMatCH,University of Nebraska Medical Center
William Sappenfield – Centers for Disease Control and Prevention
Joann Schulte– Florida Department of Health
Jennifer Skala – CityMatCH, University of Nebraska Medical Center
Carolyn Slack– Columbus Health Department
Bao Ping Zhu – Michigan Department of Community Health

11:30am - 2:00pm **LUNCH (on your own)**

Wednesday's Agenda – December 10, 2003

12:00pm -2:00pm **POSTER SESSION AND NETWORKING** **Hopi Ballroom**

LIST OF FEATURED POSTERS

Abraham, Meena	Addressing Perinatal Health Priorities in Baltimore City	#109
Akinpelu, Oluwatoyin	Maternal Contact with Law Enforcement in San Bernadino County and Death of Infants from SIDS (A Control Study)	#41
Boulet, Sheree	Secular Trends in C-Section Rates Among Macrosomic Deliveries in the US 1989 - 2000	#57
Burka, Genet	Infant Mortality (IM) Risk Factors and Trend Analysis in Louisiana	#LB 37
Chabra, Anand	What Fathers Need: A Countywide Assessment of the Needs of Fathers of Young Children	#34
Chin, Nancy	Nutrition/Exercise Education in an After-school Program: Linking University Research with Community Programs	#98
Clay Wright, Victoria	Assisted Reproductive Technology (ART) Surveillance, US 2001	#LB 55
Clark, Elizabeth	Risk Factors for Smoking Cessation Relapse After Pregnancy	#82
Dzakpasu, Susie	Canadian Maternity Experiences Survey Pilot Study	#104
Edwards, Maureen	Improving MCH Systems in MD through State and and Local Collaboration	#106
Ezra, Markos	Race/Ethnicity, Nativity and Perinatal Mortality in New Jersey: Implications for Prenatal Care and Women's Health	#21
Hossain, Shaheen	Adventures in Public Health: An Evaluation of a Public Health 101 Course	#121
Hossain, Shaheen	Workforce Development Activities in Utah: An Evaluation of Analytic Training	#122
Hutchins Ellen	Fetal and Infant Mortality Review: Using Qualitative Data to Address Issues Related to Health Disparities	#49
Kan, Jianli	Repeat Birth Born to Teenage Mothers - A Risk for Infant Mortality	#LB 41
Kane, Debra	Estimated Costs Associated with the Provision of Medicaid Prenatal Case Management	#LB 20
Kanotra, Sarojini	Maternal Health Concerns after Delivery: Insights from the PRAMS	#99

Wednesday's Agenda – December 10, 2003

LIST OF FEATURED POSTERS (cont'd)

Kuehn, Carrie	Risk of Malformations Associated with Residential Proximity to Hazardous Waste Sites in Washington State	#LB 35
Lamm, Steven	Early Maternal Thyroidal Insufficiency (EMTI) is a Treatable and Preventable Cause of Neurodevelopmental Deficits	#125
Legardy, Jennifer	The Effects of Skill-Based Intervention Promoting Consistent and Correct Use of the Male Condom Among High-Risk Women	#LB 40
Li, Qing	Placenta Previa: Neonatal Mortality Among Live Birth in the US	#115
Lin, Tsai Mei	Designing The Optimal File Linkage Algorithm	#30
Liu, Jihoung	Early Weaning and Perinatal Cigarette Smoking: Findings From the 2000 - 2001 OR PRAMS	#LB 19
Lopez-Valentin, Mariel	Pregnancy-Related Deaths in Puerto Rico, 1999 - 2001	#63
Lopez-Valentin, Mariel	Association Between Excessive Pre-Term Weight and Inadequate Weight Gain with Maternal and Neonatal Complications	#118
Major , Judith	Multivitamin Usage Among Women Given Free Vitamins Through a Region-Wide Distribution Program in Western North Carolina	#61
Menkhaus, Kathleen	Colorado Hospital Practices and Policies that Support Breastfeeding	#LB 45
Miller, Curt	Prepregnancy Maternal Body Mass Index and Pregnancy Outcomes Among Florida Women	#134
Morton, Ingrid	Prenatal Care Use After Welfare Reform: An update on New Jersey Immigrant Mothers	#88
Okoh, Yvonne	Pregnancy-Related Mortality in the US: Ethnic Disparities in African-Americans and Hispanic-Americans, 1993 - 1999	#LB 56
Perham-Hester, Katherine	Postpartum Smoking Cessation Barriers and Aids for Alaskan Women	#100
Perrin, Karen	FL Birth Certificate Data 1998-2000: Do the Risk Factors for Poor Pregnancy Outcomes Hold True for Both Whites and Blacks Equality?	#17
Quadri, Nighat	Insurance Status as a Barrier to Early Entry into Prenatal Care in Hawaii	#LB 24
Ralls, Brenda	The Influence of Selected Risk Factors on Gestational Diabetes Mellitus	#74

Wednesday's Agenda – December 10, 2003

LIST OF FEATURED POSTERS (cont'd)

Rodriquez-Lopez Aurea	Puerto Rico Maternal Infant Health Survey, 2002	#62
Russell , Rebecca	Peristats: A Resource to Support Maternal and Child Health Professionals	#67
Sebastian, Anoop	Tuberculin Sensitivity in Apparently Healthy School Children in South India	#LB 33
Shaffer,Tracie	Factors Associated with Self-Related General and Diabetes Health in Older Adolescents and Young Adults with Diabetes	#LB 54
Simon, Sherenne	Confirming Suicide Deaths Through Record Linkage of the Hospital Discharge and Death Certificate File	#79
Smith, Leah	Marketing Model for Improving Perinatal Health Outcomes	#LB 46
Tabidze, Irina	Initial Community Response to Perinatal Periods of Risk (PPOR) Approach	#10
Telfair Sharpe, Tanya	Sex-for-Crack-Cocaine Exchange, Poor Black Women and Pregnancy	#112
Tomashek, Kay	Fetal deaths >20 weeks' gestation Among WA Residents, 1992 - 1999	#117
Torres-Rodriquez, Evelyn	Puerto Rico Infant Mortality Epidemiologic Surveillance System 1996 - 2000	#64
Tran, Tri	Association Between Neonatal Hospital Level and Mortality Among VLBW Neonates in Louisiana from 1995-2000	#29
Wilcox, Ellen	The Psychological Sequelae of Childhood Forced Sex: A Study of Maternal Mental Health in Pregnant and Postpartum Adolescent Mothers	#LB 27
Xaverius, Pamela	Syphilis Infection Around the Time of Pregnancy	#LB 49
Yan, Li	Identifying Population-Based Repeat Pregnancies for Health Outcomes Research	#102

Wednesday's Agenda – December 10, 2003

2:00pm – 3:30pm **CONCURRENT SESSION B**

B1	**Improving Access to Health Care** **Moderator: Karen Bell**	**Kachina 6**
	Medicaid/SCHIP: How Do We Help Congress Understand Their Importance to MCH Populations?	Peggy Bailey #1
	The Effect of Collocation of WIC at Managed Care Organization Sites: ID of a Simple referral process	Larissa Brunner #44
	Access to Health Care Among Hispanic/Latino Children: US 1998-2001	Scott Gulner #53
	Dynamic Changes in Medicaid Coverage of Pregnant Women	Yan Li #97
B2	**Innovative Approaches in Data Use** **Moderator: Bao Ping Zhu**	**Kachina 3**
	Identifying Children at Risk by Linking Data from Administrative Datasets, The DC Experience	Daniel Welsh #24
	The Effect of 2000 Census-Level Population on Teenage Birth Rates for States in the 1990's	Stephanie Ventura #124
	Using Neighborhood Types to Identify Populations at Risk for Poor Birth Outcomes	Huide Ye #131
	Examining the Effect of Patient, Physician, and Hospital Characteristics on Maternity Length of Stay Using Regression and Multilevel Modeling Statistical Techniques	Denise Giles #LB 58
B3	**Maternal Experience Before, During and After Pregnancy: Findings from PRAMS** **Moderator: Amy Lansky**	**Amphitheater**
	Women, Infant, and Children (WIC) Program Participation and the Effect on Breastfeeding Practices in Louisiana	Joanna Habel #27
	Comparison of PRAMS Self-Report of Selected Pregnancy Morbidities with Birth Certificate Records	Laurie Baksh #46
	How HI Defines Unintended Pregnancy in 2000-2001 PRAMS Data	Limm Song #LB 13
	Using PRAMS Data to Evaluate Folic Acid Knowledge and Multivitamin Usage of Women of Childbearing Age in Alabama	Carol Dagostin #LB 29

Wednesday's Agenda – December 10, 2003

2:00pm – 3:30pm **CONCURRENT SESSION B (cont'd)**

B4	**Maternal Mortality: The Importance of a Surveillance System** **Moderator: Susan Nalder**	**Kachina 4**
	Maternal Mortality in CA, 1990- 2001: Active Surveillance of Emerging Populations	Karen Menendez #80
	Maternal Mortality Review in MD	Meena Abraham #108
	Case Review of Rare Conditions as an MCH Tool to Improve Follow Up and Prevention Strategies - GA Experience	Violanda Grigorescu #128
	An Assessment of the Incidence of Maternal Mortality in the U.S., 1995-1997	Andrea MacKay #LB 9
B5	**Domestic Violence-Prevention and Assessment** **Moderator: Corinne Miller**	**Kachina 5**
	Correlation Between Maternal Conditions and Child Maltreatment	Changxing Ma #60
	Intimate Partner Physical Domestic Violence (IPP-DV) Among Childbearing and Pregnant Women, CA 1998-2001	Zipora Weinbaum #83
	Prenatal Care (PNC) Provider Screening for Intimate Partner Violence (IPV), California 1999-2000	Kim Wells #129
B6	**Maternal Child Health Projects Among American Indian and Alaskan Native (AIAN)Communities** **Moderators: Leslie Randall**	**Kachina 1**
	AI Women's Trust and Investment in a Community Initiated Research Project	Denise Wolf #135
	Perceived Health and Sense of Control Among Women in a Southwest American Indian Tribe	Norma Gray #136
	Using formative Research to Design Community and Family-Based Intervention to Address Toddler Obesity and Early Childhood Caries	Tam Lutz #137
	Factors Associated with AI Teen's Self-Rated Health	Tassy Parker #138

Wednesday's Agenda – December 10, 2003

2:00pm – 3:30pm **CONCURRENT SESSION B (cont'd)**

B7 **Advancing Perinatal HIV Prevention the United States** **Kachina 2**
Moderator: Margaret Lampe

Advancing HIV Prevention: a New CDC Initiative Margaret Lampe

Prenatal HIV Testing Stephanie Samson

Perinatal HIV Prevention in New York Roberta Glaros

3:30pm – 4:00pm **BREAK**

4:00pm – 5:30pm **PLENARY SESSION II** **Hopi Ballroom**

Preterm Delivery Initiatives

Welcome
Peter Van Dyke – Associate Administrator for Maternal and Child Health Bureau, Health Resources and Services Administration

Moderator:
Jesse Richardson Hood – Public Health Advisor, Division of Reproductive Health, Centers for Disease Control and Prevention

Presenter:
Nancy Green – Medical Director, March of Dimes

Carol Brady – Executive Director, Northwest Florida Health Start Coalition

Peter Van Dyke – Associate Administrator for Maternal and Child Health Bureau, Health Resources and Services Administration

5:30pm **ADJOURN**

Wednesday's Agenda – December 10, 2003

Thursday's Agenda – December 11, 2003

8:00am – 9:30am **CONCURRENT SESSION C**

C1	**Improving the Mental Health of Women: Recognition and Treatment of Depression** **Moderator: Ssu Weng**	**Kachina 5**
	Targeting Depression in Pregnant and Post-Partum Women in Pinellas County, FL	Dorothy Miller *#5*
	Maternal Depressive Symptoms and Timely Use of Routine Care: The Importance of Having Health Insurance and a Usual Source of Care	Whitney Witt #11
	Association of Hispanic Ethinicity, Depressive Symptoms and Years Livingin the US with Report of Never Having Had Pap Test Among Mothers	Lisa Fortuna *#72*
C2	**Oral Health: Access and Care** **Moderator: Valerie Robison**	**Kachina 2**
	Unendorsed Dental Sealant Status in IA 2000-2002	Xia Chen #LB 12
	Self-Report Dental Utilization and Dental Problems During Pregnancy in the AR PRAMS Population, 2000	LaTreace Harris #LB 15
	Factors Associated with Reporting a Dental Problem and Not Seeking Dental Care During Pregnancy Among PRAMS Respondents in LA 1998-2000	Ranjitha Krishna #LB 50
	Dental care during pregnancy: Oregon 2000	Kathy Phipps LB #65
C3	**Pre-term Births: Indicators, Intervention and Cost** **Moderator: Eve Lackritz**	**Kachina 4**
	Pregnancy Risk Assessment Monitoring System PreTerm Birth and Possible Indicators, WV 1996-2000	Melissa Baker #13
	Using Local Research to Develop Community Interventions to Reduce Preterm LBW Births	Leisa Stanley #43
	Annual Hospital Charges for Prematurity in the US	Rebecca Russell #68
	Maternal Morbidity and its Impact on Preterm Births – GA's Experience	Violanda Grigorescu #LB 42

Thursday's Agenda – December 11, 2003

8:00am – 9:30am **CONCURRENT SESSION C (cont'd)**

C4 **Injuries During Pregnancy: Understanding and Tracking the Hidden Epidemic** **Amphitheater**
Moderator: Hank Weiss

Background and Barriers to Understanding and Tracking Maternal/Fetal Injury	Harold Weiss #36
Prevalence and Risk of Pregnancy-Associated Injury Hospitalizations: A Population-Based Approach	Harold Weiss #37
Pregnancy, Injury and Birth Outcomes: Linking Birth/Fetal Death to Hospitalization Data	Melissa Schiff #38
Pregnancy Associated Crashes and Birth Outcomes: Linking Birth/Fetal Death to Motor Vehicle Data	Lawrence Cook #39
Fetal Trauma: A Mothers Story	Monica Randall #40

C5 **Program and Policy Uses of YRBS** **Kachina 6**
Moderator: Jo Anne Grunbaum

Presenters
Celan Alo – Texas Department of Health
Rick Chiotti – Montana Office of Public Instruction
Denise Muller – Arizona Department of Education

C6 **Addressing Women's Health Issues at the Local Level** **Kachina 1**
Moderators: Angela Ablorh-Odjidja and Cindy Phillips

Women's Health Questionnaire	Walker Armfield
Partners for Healthy Lifestyles: A Cardiovascular Disease Prevention Program for African-American Women	Barbara Jackson
Women's Way Health Screening	Joyce Saylor

9:30am – 10:00am **BREAK**

Thursday's Agenda – December 11, 2003

10:00 – 11:30pm **PLENARY SESSION III** **Hopi Ballroom**

What is MCH EPI?

Welcome

Donna Stroup – Acting Associate Director, for Science, Centers for Disease Control and Prevention

Moderator

William Sappenfield – Maternal and Child Health Epidemiology Program Team Leader, Division of Reproductive Health, Centers for Disease Control and Prevention

Presenters

Arden Handler – Professor of Community Health Sciences/Maternal and Child Health, University of Illinois School of Public Health

Greg Alexander – Professor and Chair of the Department of Maternal and Child Health (MCH), School of Public Health, University of Alabama

Deborah Klein Walker – Associate Commissioner, Programs and Prevention, Massachusetts Department of Public Health

Sarah Santana—Director, Division of Epidemiology, Maricopa County Department of Public Health

11:30pm – 2:00pm **LUNCH**

11:30pm – 1:30pm **MCH EPI Conference Luau** **La Hacienda**

Thursday's Agenda – December 11, 2003

2:00pm – 3:30pm **CONCURRENT SESSION D**

D1 **Unintended and Teen Pregnancy Prevention: Research and Practice** — **Kachina 1**
Moderators: Brenda Colley Gilbert

Approaching Evaluation for the CDC Community Coalition Partnership	Jane Mezoff #33
Perceived HIV Risk and Condom Use in the Behavioral Risk Factor Surveillance	Diana Bensyl #66
Cognitive, Affective and Contextual Dimensions of Pregnancy Intentions Among Prenatal and Abortion Clinic Patients in New Orleans, LA	John Santelli #86
Measuring Dimensions of Pregnancy Intentions	Aimee Afable-Munsuz #LB 14
Timing of Marriage and Childbirth in a Population at Risk for Unintended Pregnancy	Stacy Laswell #LB 26
Contraceptive Practices in the Behavioral Risk Factor Surveillance System (BRFSS) 2002	A. Danielle Luliano #LB 32

D2 **Use of Contraception: Barriers and Subsequent Consequences** — **Kachina 4**
Moderator: Roger Rochat

Emergency Contraception in Emergency Departments, Oregon 2003	Jodi DeMunter *#4*
Emergency Contraception Pills in New Mexico: Action and Data	Ssu Weng *#15*
A Global Analysis of Inverse Association of National Contraceptive Prevalence and Maternal Mortality Rates	Laurie Mignone #45

Thursday's Agenda – December 11, 2003

2:00pm – 3:30pm **CONCURRENT SESSION D (cont'd)**

D3	**Utilization and Adequacy of Prenatal Care** **Moderator: Danny Bender**	**Kachina 5**
	Persistence of Prenatal Care Utilization Across Pregnancies in New Jersey	Charles Denk #2
	Interpreting the National Pattern of Certified Nurse Midwife-Attended Deliveries in the Year 2000	Russell Kirby *#6*
	The Impact of Administrative Changes in Public Health Services in the Prenatal Care Services and Pregnant Women in Louisiana	Brandy Wallace *#28*
	Adequecy of Prenatal CareAmong Mexican Women in Oregon, 2000	Sara Wuellner #LB 64
D4	**State Investigation into Infant Mortality** **Moderator: Millie Jones**	**Kachina 6**
	Infant Mortality and Low Birth Weight Rates Compared to Expected Rates by County for FL 2001	Daniel Thompson #12
	Composite "Pictures" of Infant Mortality in MS: 2003	Marianne Zotti *#23*
	Increasing Infant Mortality Among Very Low Birth Weight Infants - Delaware 1994-2000	Marci Drees #81
	Increasing Infant Mortality Rates (IMR) in LA: Public Health Emergency or Reporting Artifact?	Juan Acuna #LB 44
D5	**Breastfeeding Initiation** **Moderator: Rosie Li**	**Kachina 2**
	Breastfeeding Initiation Among Race/Ethnic Groups and Asian/Pacific Islander Ethnic in California	Michael Curtis #31
	The Effect of Risk Factors to Predict Breastfeeding Initiation in a WIC Population	Mary Ellen Simpson #50
	Breastfeeding Among New Mothers: Associations Between Hospital Staff's Encouragement, Breastfeeding Initiation in the Hospital, and Breastfeeding Duration	Curt Miller #132

Thursday's Agenda – December 11, 2003

2:00pm – 3:30pm **CONCURRENT SESSION D (cont'd)**

D6 **Birth Defects Prevention and Monitoring** **Kachina 3**
Moderator: Larry Edmonds

Pregnant Women Identified by Hospital Discharge Codes for Alcohol Use/Abuse: A Description of of the Women and Babies	Charlotte Druschel *#19*
Results of Neural Tube Defects Case Ascertainment Process Combining Vital Records Datasets and Birth Defects Surveillance Data, for Years 1996 - 2001 in Puerto Rico	Garcia Hector #69
Folic Acid and Pregnancy - Data from the PRAMS Project 1996-2000	Helen Marshall #73
Pregnancy Outcome Patterns for Selected Birth Defects for Selected Birth Defects in Texas Pregnant Women in Louisiana	Mary Ethen #126

D7 **Approaches to Using Data Linkage** **Amphitheater**
Moderator: Kay Tomashek

Establishing Collaborations, HIPAA regulations, and IRB clearance	Milton Kotelchuck
Sharing Lessons Learned: Experience with State Data Linkage Project (PELL Linkage Project)	Angela Naninni
A Framework for Intergrating Child Health Information Systems	Alan Hinman

3:30pm – 4:00pm **BREAK**

Thursday's Agenda – December 11, 2003

4:00pm – 5:30pm **PLENARY SESSION IV** **Hopi Ballroom**

Exploring the Transition of Care from Children to Adults with Special Health Care Needs

Welcome and Moderator
Jose Cordero – Director, National Center of Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention

Presenters
John Reiss – Associate Professor, Department of Pediatrics and Department of Health Policy and Epidemiology, University of Florida

Deborah Klein Walker – Associate Commissioner for Programs and Prevention, Massachusetts Department of Public Health

Nora Wells – Director of Research and Activities, Family Voices at the Federation for Children with Special Needs

5:30pm **ADJOURN**

Friday's Agenda – December 12, 2003

8:30am – 10:00am **CONCURRENT SESSION E**

E1	**Prenatal Care During Pregnancy: Impact of Maternal and Infant Health** **Moderator: Nancy Wilber**	**Kachina 4**
	Foreign-Born Uninsured Women in New Mexico Prenatal Issues	Ssu Weng #16
	Changes in Level of Prenatal Care Between Pregnancies in Relation to Preterm Birth	Bao-Ping Zhu #54
	Comparison of three Prenatal Care Indices and Their Association with Small Gestational Age (SGA)	LaJeana Howie #130
E2	**Data Linkage: Science and Practice** **Moderator: Russ Kirby**	**Kachina 3**
	A Superior Linkage Strategy: Improvements in Florida Record Matching for Outcomes Research	Rajeeb Das #71
	Ally linked State-Level Birth and Fetal Death Certificate Data Compared with Maternally Linked Hospital Discharge Data	Jane Lazar #77
	Linking Interactive and Research Databases: Approaches, Results, Lessons	Sherry Spence #87
E**3**	**HIV/STD: Improving Prevention, Screening, and Birth Outcomes** **Moderator: Margaret Lampe**	**Kachina 5**
	Syphillis During Pregnancy in Baltimore City	Meena Abraham #110
	HIV Counseling and Testing Practices among UT Prenatal care providers	Lois Bloebaum #120
	Prenatal Care Discussion of HIV Testing Among Women Having a Live Birth in 15 States, 1996-2000	Leslie Liscomb #LB 10

Friday's Agenda – December 12, 2003

8:30am – 10:00am **CONCURRENT SESSION E (cont'd)**

E4	**What Does the New Data on Children with Special Health Care Needs Tell Us?** **Moderator: Michael Kogan**	**Kachina 1**
	Comparing States Using Survey Data on Health Care Services for Children with Special Health Care Needs	Stephen Blumberg #139
	Analyzing Data from the National Survey of CSHCN	Virginia Sharp #141
	From Data to Action Maximizing the Value of the National Survey on Children with Special Health Care Needs to Create Sustainable Strategies for Advancing National Goals for CSHCN	Christina Bethell #140
	Dental Care and Children with Special Health Care Needs: Results from the National Survey	Rohini Singh #LB 23
E5	**American Indian Health: Issues in MCH** **Moderator: Joe Finkbonner**	**Kachina 2**
	A Description of Women's Health and Pregnancy Factors Among American Indian Women: The Ponca Tribe of Oklahoma	Tonji Durant #LB 17
	Hepatitis C Vertical Transmission Rates Among the Native American Population of the Northern Plains Tribes	Greg Welch #LB 38
	Fetal Growth in the Native American Population	Jaime Slaughter #LB 39
E6	**Risk Factors for Cesarean Sections** **Moderator: Mary Rogers**	**Kachina 6**
	A Profile of Very Low Risk Women Who had a Primary Cesarean Delivery	Fay Menacker #93
	Differential trends in US cesarean section rates: A comparison of preterm and nonpreterm birth by race/ethnicity	Michael Davidoff #105
	Risk of Birth Injuries Associated with Unassisted and Assisted Vaginal Delivery Compared to Cesarean Sections	Rashida Dorsey #LB 63

Friday's Agenda – December 12, 2003

8:30am – 10:00am **CONCURRENT SESSION E (cont'd)**

E7 **Associations Between Maternal Characteristics and Infant Outcomes** **Amphitheater**
Moderator: William Sappenfield

Birthweight: Do Age, Weight Gain, and BMI Matter?	Terri Wooten #48
Maternal Characteristics and Behaviors Among Foreign-Born Women in 5 PRAMS States-AR, CO, FL, NC and WA 1997-2000	Denise Allen #111
Association Between Prenatal Maternal Stress, Cigarette, Smoking, and Low-Birth-Weight Outcomes	Curt Miller #133

10:00am – 10:30am **BREAK**

10:30am – 12:00pm **PLENARY SESSION V** **Hopi Ballroom**

Intergrative Economic Study/Data Design in MCH

Moderator and Presenter
Stephen Saunders – Associate Director, Family Health, Illinois Department of Human Services

Presenters
Russ Kirby – Professor, Department of Maternal and Child Health, School of Public Health, University of Alabama

Scott Grosse – Health Economist, National Center on Birth Defects and Development Disabilities, Centers for Disease Control and Prevention

ABSTRACTS

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#1 - Session B1

MEDICAID/SCHIP: HOW DO WE HELP CONGRESS UNDERSTAND THEIR IMPORTANCE TO MCH POPULATIONS?

Peggy Bailey, MPA, Policy Analyst and Deborah Dietrich, Director of the Center for Policy and Advocacy, Association of Maternal and Child Health Programs (AMCHP), Center for Policy and Advocacy, Washington, D.C.

Background: As the 108th Congress winds up legislative action, the status of Medicaid and SCHIP programs and how they impact the maternal and child health community will be addressed, gaps will be assessed, and an agenda for the future will be outlined. Particularly, the Medicaid reform debate will be underway in Congress. In addition, it is important for epidemologists and state departments of health to begin thorough assessments of SCHIP to prepare for that program's Federal reauthorization in 2007.

Methods: National policy analysis and advocacy efforts undertaken by AMCHP and its partners will be highlighted.

Results: Although Congressional action for the year may not be completed at the time of the conference, conference participants will be given an overview of the legislative process, an update on the Department of Health and Human Services FY 2004 appropriation bill, evaluation of the Medicaid reform debate, and pertinent SCHIP proposals. In addition, participants will be asked for ideas on how to increase policymakers' awareness of the need for additional funds to improve public health infrastructure.

Conclusions: Though some progress on issues impacting maternal and child health has been made in the 108th Congress, much more work needs to be done. To achieve a national policy focus on these critical issues, a stronger voice needs to be developed for these issues to educate lawmakers and other policy makers.

Public Health Implications: Bioterrorism, and other immediate threats, have focused increased attention on the role of public health in our nation. However, the ongoing roles of public health have received less attention and there is reason to believe that without a concerted effort, money will be shifted toward these immediate concerns to the detriment of long-term public health infrastructure planning, as well as the needs of specific populations. Furthermore, policymakers do not understand the connection between public health and federal insurance programs. It is important the maternal and child health community articulate this connection and advocate for strengthening these programs.

ABSTRACTS

#2 - Session D3

PERSISTENCE OF PRENATAL CARE UTILIZATION ACROSS PREGNANCIES IN NEW JERSEY.

Charles E. Denk, PhD; Lakota K. Kruse, MD, MPH
Research Scientist, Maternal and Child Health Epidemiology Program, Division of Family Health Services, DHSS, Medical Director, Division of Family Health Services, DHSS

Background:
Utilization of prenatal care is known to vary cross-sectionally by sociodemographic factors: race/ethnicity, education, age, and marital status. This has been assumed to reflect variations in socio-cultural predispositions toward prenatal care and persistent access barriers. Remarkably, large proportions of women experience significant changes in utilization between their first two pregnancies, both upward and downward. The level of mobility suggests a new, dynamic interpretation of risk factors for inadequate prenatal care utilization.

Methodology:
Electronic birth certificates in New Jersey from 1996 to 2001 were probabilistically matched using AUTOMATCH software. Using the Adequacy of Prenatal Care Utilization Index (Kotelchuck), we compare utilization in the first two pregnancies to focus on two patterns: women who persist at an inadequate level of utilization, and women who slide from an adequate level of care at first pregnancy to an inadequate level in the next.

Results:
The seemingly stable distribution of prenatal care utilization from first to second pregnancy masks considerable variation across pregnancies of the same woman. Only 75% of women with adequate prenatal care utilization in the first pregnancy maintained an adequate level in the second, while 37% with inadequate utilization in the first pregnancy repeated in that status for the second pregnancy. Most demographic risk factors had similar effects in logistic models for both upward and downward movement. Women who were unmarried, less than high school educated, teen age, native or foreign-born black or foreign-born white were more likely to be "stuck" in inadequate prenatal care and to "slide" from adequate prenatal care. Adverse outcomes at the first birth predicted better retention in first-pregnancy adequate prenatal care, but greater risk of repeating first-pregnancy inadequate care.

Conclusions:
Prenatal care utilization exhibits variation across women and between pregnancies. Socio-cultural predispositions toward prenatal care and persistent access barriers are mediated by more variable situational factors.

Public Health Implications: The effects of prenatal care utilization on birth outcomes are well documented. Planning and evaluation of programs that try to improve prenatal care access and utilization must take the dynamism of utilization across pregnancies into account.

ABSTRACTS

#4 - Session D2

EMERGENCY CONTRACEPTION IN EMERGENCY DEPARTMENTS, OREGON, 2003

Jodi K. DeMunter, MD and Kenneth D. Rosenberg, MD, MPH
Office of Family Health, Department of Human Services, Portland, Oregon

Background: Unintended pregnancies are associated with poor outcomes that have significant social and medical consequences. Rape victims are a special population at risk for unintended pregnancy. Emergency contraception is effective in preventing pregnancy and has become standard of care in the treatment of rape victims. This study examines emergency contraception practices in Oregon Emergency Departments.

Methods: A single interviewer completed a telephone survey of 54 of Oregon's 57 Emergency Departments. Emergency Department staff was asked about access to emergency contraception for rape victims and women who requested emergency contraception after consensual unprotected sexual intercourse.

Results: RAPE VICTIMS: Thirty-three hospitals (61%) routinely offered emergency contraception to rape victims. Thirteen hospitals (24.1%) offered a prescription to be filled by a community hospital. Eight hospitals (14.9%) did not provide any access to emergency contraception. Neither rural nor Catholic affiliation was associated with access to emergency contraception. CONSENSUAL UNPROECTED SEXUAL INTERCOURSE: None of the hospitals had written protocol addressing emergency contraception for women following unprotected consensual intercourse. Twenty-five (46.3%) hospitals discouraged the prescribing of emergency contraception after unprotected consensual sexual intercourse.

Conclusions: Many Oregon Emergency Departments do not dispense emergency contraceptive pills prior leaving the Emergency Department. Some dispense the first does of emergency contraception but many do not simultaneously dispense the second dose prior to discharge. This creates a grave barrier to access since many community pharmacies have limited business hours and many do not stock emergency contraception. This is unacceptable access for a drug whose effectiveness deceases over time. In addition, almost half of Oregon Emergency Departments discourage the prescribing of emergency contraception for women after unprotected consensual sexual intercourse.

Public Health Implications: Access to emergency contraception is essential for optimal care of rape victims and important for pregnancy prevention in cases of unprotected consensual intercourse. This study identifies areas to improve emergency contraception access for both rape victims and all Oregonian women.

ABSTRACTS

#6 - Session D3

INTERPRETING THE NATIONAL PATTERN OF CERTIFIED NURSE MIDWIFE-ATTENDED DELIVERIES IN THE YEAR 2000

Russell S. Kirby, PhD, MS, Marilyn O. Ruiz, PhD
Department of Maternal and Child Health, School of Public Health, University of Alabama at Birmingham; College of Veterinary Medicine, University of Illinois

Background: Although nurse-midwifery has long been an option for prenatal care and labor/ delivery management, availability and utilization varies dramatically across the US, and within each state. We sought to identify ecological correlates of the use of CNMs for labor and delivery across counties in the United States.

Methods: Data from the NCHS 2000 live birth certificate file were analyzed at the individual and county level. Maps of the proportion of county deliveries by certified nurse-midwives (CNMs) county level were created to illustrate the spatial variability in utilization of this type of delivery. Multivariate Poisson regression models to predict CNM delivery rates were constructed using county level data and measures extracted from the 2002 Area Resource File, using predictors including percent of population not non-Hispanic white, population density, presence of obstetrician or hospital in county of residence, percent of births occurring in hospitals, and percent of families below the poverty level. Standardized residuals from the final model were mapped using spatial smoothing techniques to identify regions where other factors may predict variation in CNM delivery utilization.

Results: In 2000, the overall rate of CNM-attended deliveries was 7.3%, ranging from a low of 1.6% in Missouri to 27.2% in New Mexico. Intra-state variation was even more pronounced. Measurement issues may result in fewer in-hospital CNM-attended deliveries reported on birth certificates than actually occur. All of the predictor variables were statistically significant at the county level: higher proportion of births in hospitals, higher proportion of population non-Hispanic white, lack of an obstetrical hospital, and low population density reduced the proportion of births delivered by CNMs, while lack of any obstetricians and higher percent of persons below the poverty level led to an increase in deliveries by CNMs.

Conclusions: Access to CNM delivery services varies at the state and county level. Counties with poorer populations, more minorities, and no obstetricians had higher proportions of deliveries by CNMs.

Public Health Implications: The supply of CNMs and access to their services should be more broadly available. CNM practices could be better targeted to areas with limited obstetrical facilities and providers.

ABSTRACTS

#8 - Session A1

THE INFLUENCE OF STRESSORS ON PREGNANCY WANTEDNESS

Charlan D. Kroelinger MA, Heather G. Stockwell ScD., Kathryn S. Oths PhD., John Bolland PhD., and Thomas J. Mason PhD., The University of South Florida, Department of Epidemiology and Biostatistics, The University of Alabama, Department of Anthropology, The University of Alabama, Institute for Social Science Research

Background: Both physical and psychosocial stressors are associated with a woman's wanting a pregnancy. The impact of such stressors on a woman desiring a pregnancy has been under-evaluated in epidemiologic studies. This study assesses the influence of physical work stress, depression, and change in marital status on whether a woman wanted her pregnancy.

Methods: Data were collected during two periods, 1992-1997 (NIH grant #5-R29-HD-29559) and 1997-2001 (Healthy Start site, HRSA grant #5MJC-018632-02-0) as prospective cohorts. Predictor variables were collected twice during the pregnancy at the first and third trimesters. Information on whether a woman wanted her pregnancy was obtained retrospectively during the third trimester. Logistic regression models were used to assess the associations between stressors and pregnancy wantedness. Confounding by age, parity, pre-pregnant weight, >35lbs. of weight gain, lack of prenatal care, and substance abuse were controlled in each analysis.

Results: Preliminary analyses indicate that work stress during pregnancy, depression, divorce, widowhood, or marriage annulment negatively influence women when assessing whether the pregnancy is wanted. Physical work stress concerned women with unwanted pregnancies less than women with wanted pregnancies. Women who wanted their pregnancies were 44% more likely to be concerned with physical stress at work than women who did not want their pregnancies (OR = 1.44, 95% CI 1.14, 1.81). For every incremental increase in depression (Center for Epidemiologic Studies Depression Scale; CESD), women were more likely to indicate their pregnancy was unwanted (OR = 1.08, 95% CI 1.02, 1.13). Living single after having been married increased more than 2-fold the likelihood of unwanted pregnancies (OR = 2.31 95% CI: 1.17, 4.60).

Conclusions: Psychosocial and physical stressors impact a woman's assessment of whether she wants her pregnancy. Encouraging women to lessen emotional and physical stress positively influences the pregnancy experience.

Public Health Implications: Public Health practitioners may influence pregnant women through primary prevention techniques such as counseling prior to and during pregnancy, and stress reduction, reducing stress to the fetus and enabling the reproductive and birthing process to be a more positive experience.

ABSTRACTS

#10 - Poster Session

INITIAL COMMUNITY RESPONSE TO PERINATAL PERIODS OF RISK (PPOR) APPROACH

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Background: The PPOR is an approach to examine fetal and infant mortality (IM) by identifying areas of opportunities for community partners to reduce the feto-infant mortality.

Methods: Due to the time constrains in obtaining the data from linked birth-death certificates we used hospital-based data extracted from Illinois Department of Public Health (IDPH) perinatal mortality reviews for the period of 1998-2001 in Chicago's Health Region (HR) 3. Data was restricted to Birth Weight (BW) > 500 g, or Gestation > 23 weeks. Quantitative analyses were performed using Access 2000 and qualitative analyses were conducted with community partners.

Results: The highest number of perinatal deaths observed among Non-Hispanic (NH) Blacks, followed by Hispanics. Racial gap was wider for the BW group < 1500 g compared to >1500g. Very Low Birth Weight (VLBW) related deaths occurred predominantly among African-American unmarried women. Mothers' drug screening revealed that 17% were positive, 38 % had negative results and 45% were unknown. Major patient contributing factors associated with mortality were identified as inadequate/no prenatal care, drug use, smoking and delay in presentation to the hospital; in 42% of the cases medical risk factors were none. The major causes of death for both BW groups were attributed to the prematurity (23.5 %), followed by congenital malformations (10.5%) and abruption (9.3 %). 21.3 % of deaths were labeled as cause " unknown". Number of root "systems" issues, such as poverty, lack of transportation or childcare, a need to conceal drug use, lack of regular source of health care, race-related healthcare inequalities, low literacy level, language and cultural barriers, provider competency and conscientiousness were cited by community members as reasons for not obtaining prenatal care.

Conclusions: Racial/ethnic minorities continue to have the highest rates of fetal and neonatal deaths. Barriers to prenatal care varied by demographic group. System changes were recommended by community members and included increased attention to substance abuse treatment/prenatal care interaction, focus on provider/staff preconceptional/prenatal care education to address social issues relevant to vulnerable women in urban communities.

Public Health Implications: The complex psychosocial and demographic factors surrounding IM necessitate a multidimensional approach to IM reduction intervention.

ABSTRACTS

#11 - Session C1

MATERNAL DEPRESSIVE SYMPTOMS AND TIMELY USE OF ROUTINE CARE: THE IMPORTANCE OF HAVING HEALTH INSURANCE AND A USUAL SOURCE OF CARE

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Background: Maternal depression is associated with adverse health outcomes in children. However, the influence of maternal depression on maternal access to health care is not well understood. We examined the association of use of routine periodic health examinations among mothers with maternal depressive symptoms, health insurance status, and having a usual source (USC).

Methods: We examined data on 5,538 mothers ages 18-49 included in the 1998 National Health Interview Survey, a nationally representative sample. We defined our outcome, delayed care, as greater than 2 years since a routine check-up. Maternal depressive symptoms were measured by a six-item distress battery known to be correlated with DSM-IV defined depression. Mothers with high, high to moderate, or moderate to low levels of distress were considered to have depressive symptoms. We examined health insurance as a dichotomous variable (yes/no). Multivariate regression analyses controlled for maternal age, education, race/ethnicity, a live birth within the last five years, single parent status, poverty threshold level, and region.

Results: 12.9% of mothers reported depressive symptoms. Mothers with depressive symptoms were more likely to be uninsured (23.2% vs. 15.0% $p<0.05$), be without a USC (16.1% vs. 9.4% $p<0.05$), and report delayed routine care (26.6% vs. 21.4% $p<0.05$). Multivariate regression revealed that mothers with depressive symptoms (OR 1.2 [CI: 1.0-1.5]) were more likely to report delayed routine care. Not having insurance (OR 1.6 [CI: 1.3-2.0]) or a USC (OR 3.3 [CI: 2.6-4.1]) were also associated with delayed routine care. Depressed mothers without a USC were nearly six times more likely to delay care compared to their non-depressed counterparts, who were three times as likely.

Conclusions: Mothers with depressive symptoms report delays in receiving routine care. The likelihood of delayed care substantially increases if these mothers do not have a USC. Ensuring that mothers have continuity of care, particularly depressed mothers, is especially important in obtaining timely preventive services.

Public Health Implications: Mothers with depressive symptoms who do not receive timely routine care are likely to go unscreened for important preventable and treatable conditions, including depression. This has significant implications for the long-term health and well-being of mothers and their children.

ABSTRACTS

#12 - Session D4

INFANT MORTALITY AND LOW BIRTH WEIGHT RATES COMPARED TO EXPECTED RATES BY COUNTY FOR FLORIDA 2001

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Background: To improve access to prenatal care and pregnancy outcomes, Florida has funded Healthy Start Coalitions (HSC) since 1992. HSCs provide oversight for local MCH systems of care and use county specific data to track infant mortality (IM) and low birth weight (LBW). The state MCH office annually calculates actual and expected statistics for each county, enabling HSCs to monitor county progress and compare each county to the state.

Methods: 2001 vital statistics data were used to calculate statistics for each of Florida's 67 counties, using indirect adjustment methods and the Z test for statistical significance. The outcomes of interest were IM, (death in the first 12 months of life) and LBW (infants weighing <2500 grams). Expected rates were calculated by adjusting for maternal race, marital status and education. These factors were used in the adjustment because all are known to be associated with risk for IM and LBW. In addition, these factors are not routinely influenced by public health interventions.

Results: In 2001, 5 out of 67 (7.4%) counties had an IM rate that was significantly higher than expected, and 9 out of 67 (13.4%) had a LBW rate that was significantly higher than expected . For both outcomes, most of these counties were in the northern half of the state but they did not reveal any other consistent geographic pattern.

Conclusions: After adjusting for demographic factors, very few counties in Florida have IM or LBW rates that are statistically significantly high compared to the state as a whole. Identifying these counties enables public health interventions to be become more finely focused on factors other than maternal race, education and marital status. Adjusting for demographic factors and statistical testing are used in Florida to avoid conclusions about IM and LBW that reflect demographic differences in counties or only random variation.

Public Health Implications: Comparing county specific IM and LBW rates to statewide rates is of limited value unless adjustments are made for each county's demographic characteristics and statistical methods are applied.

ABSTRACTS

#13 - Session C3

PREGNANCY RISK ASSESSMENT MONITORING SYSTEM, PRE TERM BIRTH AND POSSIBLE INDICATORS, WEST VIRGINIA 1996-2000

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Background: Pre term birth is the leading cause of neonatal deaths not associated with birth defects. Survival rates of infants have been shown to increase with gestational age. *Healthy People 2010* Objective 16-11a and *West Virginia Healthy People 2010* Objective 16.6 set a target to reduce pre term births (< 37 weeks gestation) to no more than 7.6% of total births. This study examines pre term birth data from West Virginia PRAMS. PRAMS is an ongoing, population-based surveillance system collecting information on maternal behaviors before, during and after pregnancy.

Methods: We looked at the prevalence of pre term birth in West Virginia from 1996 through 2000. Indicators include; gestational age, birth weight, maternal age, prenatal care, maternal smoking/drinking habits, recording of birth defect on birth certificate, and stressors. Results were produced using the statistical software SUDAAN to account for sampling design and weighted data.

Results: Results from 1996 - 2000 indicate pre term birth (as percentage of all births) was 10.08% in 1996, 11.24% in 1997, 12.04% in 1998, 11.63% in 1999 and 12.47% in 2000. Data indicate that pre term birth is more likely to occur when mother is < 19 years of age, smoked/ drank during pregnancy, experienced 3 or more stressors during pregnancy or birth certificate indicates a defect. Infants born pre term were more likely to be low birth weight.

Conclusions: The prevalence of pre term birth has not decreased in West Virginia in recent years. Pre term birth can be reduced with prenatal counseling, education and care.

Public Health Implication: Despite the low proportion of pregnancies resulting in prematurity, expenditures for care of pre term infants total an exorbitant amount compared to the cost incurred for all newborns. These data can be used to enhance understanding of maternal behaviors regarding premature infants. These findings can be used to enhance existing and develop programs regarding prematurity. Reduction in pre term delivery would result in an overall reduction in infant illness, disability and death.

ABSTRACTS

#15 - Session D2

EMERGENCY CONTRACEPTIVE PILLS IN NEW MEXICO: ACTION AND DATA

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Background: Unintended pregnancy resulting in live birth is associated with adverse maternal behaviors, including delayed entry into prenatal care, cigarette smoking, use of alcohol and other drugs, and may be associated with adverse birth outcomes as well as unfavorable child-rearing practices. Emergency contraceptive pills could reduce unintended pregnancies by 89% if used promptly. However, lack of public awareness and barriers to obtaining ECPs limit the success of this method. In Washington State, collaborative agreements between pharmacists and physicians have increased access to ECP. This presentation/poster shows how data specific to New Mexico helped raise awareness of these issues among pharmacists and professionals.

Methods: Planned Parenthood of New Mexico led the ECP pharmacy initiative by contacting the NM Board of Pharmacy and Pharmaceutical Association. Descriptive survey data from NM Pregnancy Risk Assessment and Monitoring System (PRAMS) live births in 1998 supported these activities. NM Office of Vital Records provided the number of abortions reported in 1996. NM Medicaid program provided 1998 reimbursement allowances.

Results: Planned Parenthood of New Mexico and NM Family Planning Program presented information about pharmacy initiatives in Washington and unintended pregnancy in NM to the Board of Pharmacy and the Pharmaceutical Association. During the legislative session of 2001, SB 353 was passed and signed into law, allowing the Board of Pharmacy to implement protocols giving pharmacists prescribing authority. Implementation awaits approval by the Board of Medical Examiners.
Among 23,984 live births, 42.9% (39.2%-46.6%) resulted from unintended pregnancy, and 12.0% (9.5%-14.5%) or 2871 (2267-3475) were not ever wanted ("unwanted"). Unintended pregnancy was correlated with maternal smoking, folic acid awareness, alcohol use, and entry to prenatal care. Rough direct costs of "unwanted" births were presented.

Conclusions: Unintended pregnancy affects a large number of NM women and is correlated with maternal risk factors related to outcomes of pregnancy.

Public Health Implications: Data about intention of pregnancy helped support a multi-agency collaboration to enact policy changes addressing pharmacy access to ECP in NM. Even rough estimates of costs of unintended pregnancy helped motivate efforts.

ABSTRACTS

#16 - Session E1

FOREIGN-BORN UNINSURED WOMEN IN NEW MEXICO: PRENATAL ISSUES

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Background: Information on prenatal care among foreign-born uninsured women can inform discussion about expanding Medicaid coverage to non-citizens. This issue is important because over 17% of NM residents with live birth in 2002 were foreign-born, and studies have found associations between inadequate prenatal care and adverse outcomes for mother and infant.

Methods: Data from NM Vital Records provided the Pregnancy Risk Assessment and Monitoring System (PRAMS) sampling frame and demographic variables. Descriptive analyses were done with responses from 5565 women with a singleton birth between July 1997 and December 2000. The independent variable, payer of prenatal care, was used to compare foreign-born uninsured women with Medicaid clients (other categories were women who were U.S.-born uninsured, had Indian Health Service or private insurance). Dependent variables included outcomes for singleton infants and their mothers of singletons, and maternal characteristics and experiences.

Results: Singletons weighing under 1500g were less likely to be born to foreign-born uninsured women (3.9%; 1.2-6.6%) than Medicaid clients (7.6%; 6.3-9.0%). Foreign-born uninsured women were less likely to enter prenatal care within the first trimester (53.1%; 45.5-60.6% vs. 63.3%; 60.5-66.1%). Among women with late or no prenatal care, the majority of foreign-born (66.6%; 55.1-78.2%) and Medicaid (54.6%; 49.7-59.5%) mothers were satisfied with the time care started. Hypertension during pregnancy was less prevalent among foreign-born uninsured women (8.2%; 4.6-11.8% vs. 14.7%; 12.9-16.5%), as was maternal hospitalization (20.6%; 14.5-26.8% vs. 30.5%; 28.0 - 33.1%), smoking cigarettes during the last 3 months of pregnancy (3.2%; 0.2-6.3% vs. 15.9%; 13.8-17.9%), unintended pregnancy (34.0%; 26.7-41.3% vs. 54.7%; 51.9-57.4%), or six or more stressful experiences during the year before delivery (5.9%; 2.3-9.6% vs. 14.8%; 12.8-16.7%). Duration of infants' or mothers' hospitalization, or infant's use of intensive care did not differ.

Conclusions: Despite later entry to prenatal care, some outcomes appear at least as favorable for foreign-born uninsured as Medicaid women. Healthier maternal characteristics or experiences may play a role. For comparability, the "foreign-born uninsured category" needs to be stratified by income.

Public Health Implications: The above data suggest that utilization of prenatal care may increase only after education about the importance of timely care, especially among foreign-born uninsured women. Efficient use of existing resources may require focusing on pregnancy outcomes of Medicaid clients, and postponing coverage of foreign-born uninsured women.

ABSTRACTS

#17 - Poster Session

FLORIDA BIRTH CERTIFICATE DATA 1998-2000: DO THE TRADITIONAL RISK FACTORS FOR POOR PREGNANCY OUTCOMES HOLD TRUE FOR BOTH WHITES AND BLACKS EQUALLY?

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ABSTRACT BACKGROUND: Despite a dramatic decrease in infant mortality in the United States in recent years, a gross disparity still exists between the survival rates of black and white infants. This disparity has been linked to the differential prevalence of poor pregnancy outcomes, namely low birth weight and preterm delivery, between black and white mothers. Numerous risk factors have been proposed to account for this disparity yet recent findings point suggest that traditional risk factors do not affect blacks and whites equally, and racial bias is at work.

PURPOSE: To analyze Florida 1998-2000 birth certificate data to assess if the traditional risk factors of "single" marital status, no college education, and teenage pregnancy affect the incidence of LBW or preterm delivery in blacks and whites.

METHODS: 44,392 birth certificates were analyzed using chi-square tests to see if there was significant difference between risk groups and non-risk groups in the incidence of LBW or preterm delivery for blacks, whites, and all mothers. Odds ratios were calculated to assess the impact of each factor if it presented itself as significant.

RESULTS: Whereas a college education(OR=1.29) and a maternal age greater than 19 (OR=1.32) acted as protective factors for whites against LBW, these factors had no bearing on the incidence of LBW among blacks. Also, whereas a college education (OR=1.14) and a maternal age greater than 19 (OR=1.15) act as protective factors for whites mothers against preterm delivery, these same factors do not affect the incidence of preterm delivery among blacks.

CONCLUSION: Through this study, it was shown that the traditional risk factors of teenage pregnancy and lack of college education did not affect the incidence of poor pregnancy outcomes among blacks in any significant manner yet these same risk factors did affect the pregnancy outcomes among the white population. These results confirm earlier studies which found that traditional risk factors cannot offer the complete explanation for why the racial disparity in poor pregnancy outcomes exists, and give credence to the theory that racial bias against blacks is to blame. Lastly, some possible mechanisms by which racial bias could be acting are discussed.

ABSTRACTS

#19 - Session D6

PREGNANT WOMEN IDENTIFIED BY HOSPITAL DISCHARGE CODES FOR ALCOHOL USE/ABUSE: A DESCRIPTION OF THE WOMEN AND BABIES

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Background: Prenatal alcohol exposure has been associated with a spectrum of birth outcomes with fetal death and fetal alcohol syndrome (FAS) the potential result of heaviest exposure. Development of specific effects is influenced by mediating factors including dose of alcohol, pattern of exposure (binge vs. chronic), developmental timing of exposure, genetic sensitivity, and maternal characteristics such as metabolism, nutrition and parity. Heavy drinking for the duration of a pregnancy has been associated with growth deficiency.

Methods: In a defined region of the state, two cohorts of pregnant women giving birth from October 1997 to December 1999 were identified and their records were abstracted. One group was women that were using/abusing alcohol identified through the hospital discharge database. The second group was a population-based, random sample of births without birth defects. A comparison of these two cohorts is planned.

Results: 204 women were identified with hospital discharge codes indicating alcohol use/ abuse and 211 babies were born to this group of women. 134 women were identified in the control group of healthy pregnancies, with 134 births. Average birth weight for the alcohol-exposed births is 2788 grams compared to 3361 grams for the control group. Average gestational age is slightly less in the alcohol- exposed group (37 weeks vs. 38 weeks) and age of mother is slightly higher (29 years vs. 27 years). Planned analyses are to compare the two cohorts on maternal characteristics, documented quantity and patterns of alcohol use, and infant characteristics such as growth measurements and other exam findings.

Conclusions: Abuse of alcohol by pregnant women impacts birth outcomes. Comparisons of exposed versus healthy pregnancies improves our understanding of the alcohol's impact.

Public Health Implications: With improved understanding of the relationship between birth outcomes and prenatal alcohol exposure, resources can be more effectively targeted to address prevention.

ABSTRACTS

#20 - Session A4

PREGNANCY-ASSOCIATED HOSPITALIZATIONS IN THE UNITED STATES, 1999-2000

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Background: Pregnancy-associated hospitalization as an index of maternal morbidity is an important public health problem in terms of personal and financial costs. Studies from managed care, military, and state-based populations have documented that 8-27% of women are hospitalized at least once during pregnancy prior to delivery. National hospital discharge data provide valuable information for quantifying the magnitude of hospitalizations for pregnancy-associated complications. The last national estimates of pregnancy-associated hospitalizations found a decrease in hospitalizations during pregnancy, from 22.2/100 births in 1986-87 to 16.7/100 births in 1991-1992. The purpose of this study was to update the national estimates of pregnancy-associated hospitalizations.

Methods: We analyzed 1999 and 2000 National Hospital Discharge Survey (NHDS) data to examine non-delivery hospitalizations during pregnancy. Early pregnancy loss hospitalizations were defined as non-delivery hospitalizations for molar and ectopic pregnancies and non-elective abortions. All other non-delivery hospitalizations during pregnancy were classified as antenatal hospitalizations. Pregnancy-associated hospitalizations include both early pregnancy loss and antenatal hospitalizations. We calculated the ratio of hospitalizations for antenatal complications and early pregnancy loss per 100 deliveries. SUDAAN software was used to adjust for the complex sampling design of the NHDS.

Results: The 1999-2000 pregnancy-associated hospitalization ratio per 100 deliveries was 12.8 (CI, 11.8-13.8), which included 10.5 (CI, 9.6-11.4) antenatal hospitalizations and 2.3 (CI, 2.0-2.6) hospitalizations for early pregnancy loss.

Conclusions: Antenatal and early pregnancy loss hospitalizations have continued to decline since the early 1990's. Further studies need to elicit whether this decrease indicates an actual reduction in maternal morbidity or reflects changes in medical practice and management.

Public Health Implications: Despite further decline, hospitalizations during pregnancy remain a significant public health burden. Understanding factors associated with decreasing antenatal hospitalization is an important focus for public health research in maternal health and preventing morbidity.

ABSTRACTS

#21 - Poster Session

RACE/ETHNICITY, NATIVITY AND PERINATAL MORTALITY IN NEW JERSEY: IMPLICATIONS FOR PRENATAL CARE AND WOMEN'S HEALTH

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Background: Research using Perinatal Periods of Risk Approach has made a strong case for combining fetal loss and early neonatal death as an indicator of the effect of maternal health on pregnancy outcomes. This study extends this approach to the analysis of disparities in perinatal mortality by race/ethnicity and nativity. Recent studies on disparities have indicated strong relationship between nativity and pregnancy outcomes. However, analysis on risk factors associated with disparities has not been conclusive. Our study focuses on: (1) examining differentials in perinatal mortality by race/ethnicity and nativity, and (2) investigating critical risk factors associated with disparities in perinatal mortality.

Methods: Information for this analysis was derived from the New Jersey linked Birth/Infant Death, and Fetal Death files for 1989-2000. We used descriptive statistics to show the distribution of births, fetal deaths and infant deaths by various population groups. Multivariate logistic regression models were then used to examine the association between race/ethnic, nativity and perinatal mortality by adjusting for risk factors including age, marital status, education, parity, prenatal care, and mother's medical conditions.

Results: We found a wide variation in the risk of perinatal mortality across race/ethnicity with births to non-Hispanic black women suffering the highest risk and births of Asian women experiencing the lowest. We also found that nativity has a crucial influence on disparities; particularly for those groups with high proportions of foreign-born mothers. For the Hispanic and black non-Hispanic categories, foreign-born mothers have better outcomes compared to their native-born counterparts. Results from the multivariate logistic regression show that age, marital status, parity, prenatal care, and mother's medical conditions, are crucial risk factors associated with disparity.

Conclusion: Some reduction in perinatal mortality was observed across all race/ethnic groups. However, the gap between groups, particularly between blacks and whites remains wide. Prenatal care and mother's medical conditions played significant role in explaining much of the observed disparities.

Public Health Implications: Investigating differentials in perinatal mortality by race/ethnicity and nativity and determining the critical risk factors associated with perinatal loss, can help identify target groups for intervention strategies aimed at improving pregnancy outcomes through enhanced services for prenatal care and mother's health.

ABSTRACTS

#23 - Session D4

COMPOSITE "PICTURES" OF INFANT MORTALITY IN MISSISSIPPI: 2003

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Background: Because infant mortality (IM) is complex, recognizing the most effective strategies for reducing the high Mississippi IM rate is difficult. This paper demonstrates how mapping statewide feto-infant mortality rates (FIMR) identified opportunity gaps in Mississippi State Department of Health (MSDH) programs and studies.

Methods: The Perinatal Periods of Risk (PPOR) approach uses birthweight and age at death to map FIMR into four categories, Maternal Health/Prematurity, Maternal Care, Newborn Care, and Infant Health. Each category has different contributing factors. Analyses were conducted on a file containing 1997-1999 Mississippi resident singleton fetal deaths at >24 weeks of gestation and live births/deaths of infants weighing >500 grams. Population results were compared with an internal reference group (RG) of presumed low-risk women—white non-Hispanic women aged >20 years with >13 years education—to determine excess mortality for each component.

Results: The FIMR for the Mississippi (MS) population group was 12.4/1,000 live births and fetal deaths compared with 7.5/1,000 for the RG. The FIMR is nearly two times higher in the death categories Maternal Health/Prematurity (MS = 4.2; RG = 2.4), Maternal Care (MS = 3.2; RG = 1.9), and Infant Health (MS = 3.1; RG = 1.6). The difference between the groups in the death category Newborn Care was negligible (MS = 1.8; RG = 1.6), signifying no additional initiatives needed in this area. Comparisons of deaths among white and black races showed large racial disparities, with blacks having an overall excess mortality nearly seven times greater than white (white = 1.5; black = 10.4). PPOR was not conducted on other races/ethnicities due to low numbers. MSDH program performance and studies were then used to create a composite "picture" for each component with excess mortality and reviewed by the Maternal and Child Health (MCH) team while planning future studies and initiatives. The use of these pictures in planning will be presented.

Conclusions: A systematic approach in assessing FIMRs enhanced MCH planning, appropriately targeted interventions, and directed studies to help Mississippi decrease its fetal and infant mortality.

Public Health Implications: PPOR is useful for statewide public health planning that addresses fetal and infant mortality.

ABSTRACTS

#24 - Session B2

IDENTIFYING CHILDREN AT RISK BY LINKING DATA FROM ADMINISTRATIVE DATASETS, THE DISTRICT OF COLUMBIA EXPERIENCE

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Background: Identifying and locating children at risk is a serious health problem. While government maintains a wealth of information on children, data is segmented among numerous organizations because of previously defined bureaucratic missions. This organizational structure contributes to a "silo" effect where information is often not shared or accessible to other organizations. As with many localities, the District has no unified data source on children or those at-risk.

Methods: Maternal and Family Health launched a population-based information system designed to link administrative data to identify and describe child populations. DC Kids Link, a web-based system, relies on newborn genetics screening information to populate the database. This data is matched with other MCH data generating systems like newborn hearing, birth defects, and Healthy Start. Additional data sources populating the system include birth and infant mortality, early intervention, Medicaid, income benefits, immunization, lead screening, and WIC. The matched or joined records are stored in the system by birth cohort. Users can generate reports showing aggregate data and may also view information on individual children.

Results: Linking administrative data on children through a website has proven technically feasible and allows program users to obtain information not previously available on underserved populations. For example, by combining newborn screening and birth records, both population-based data sets, the user can identify newborns not receiving genetics testing by the hospital.

Conclusions: Linking data from multiple data sources requires political, organizational, planning, and technical skills, along with a little bit of luck and a lot of patience. This website provides both health planners and program staff with useful information that can improve services to at risk populations.

Public Health Implications: Data, or more importantly the lack of data, influences how program planners define eligibility criteria and how and where services are offered. Linking data provides an opportunity to create new information from existent data sources to determine the status of at risk groups.

ABSTRACTS

#26 - Session A4

PREGNANCY OUTCOMES IN WOMEN WITH RHEUMATOID ARTHRITIS OR ANKYLOSING SPONDYLITIS IN WASHINGTON STATE

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Background: Rheumatoid arthritis (RA) and ankylosing spondylitis (AS) are autoimmune conditions that affect the skeletal system and connective tissue. RA is associated with joint inflammation and swelling of the hands, fingers, and wrists, whereas AS is marked by spinal inflammation and stiffness. The onset of RA typically occurs between the ages of 30-55 years, and affects 1.5 million women in the US. Age of onset for AS is between 20-30 years, and affects an estimated 1,000,000 people in the US. It is possible that the disease process, medications used for therapy, or reduced mobility among affected women may all have adverse effects on pregnancy outcome.

Methods: We conducted a cohort study in Washington State using linked birth certificate-hospital discharge data. All women whose pregnancy hospitalization included a discharge code for RA or AS (ICD-9=714.0 and 720.0, respectively), and with a singleton birth between 1987 – 2001 were identified (N=237). For comparison, 710 randomly selected women were identified from among the remaining records for the same years of birth. Groups were matched by year of birth, 1:3.

Results: Preliminary unadjusted analyses suggest that infants of women with RA or AS have increased risk of birth by cesarean section (Relative Risk [RR] = 1.82, 95% Confidence Interval [CI] 1.24- 2.65), weighing <2500 grams (RR = 1.96, 95% CI 1.13- 3.41), and being born at <37 weeks gestation (RR = 1.68, 95% CI 1.11- 2.55), compared to those born to women without these conditions. Continued analyses include adjustment for potential confounders, evaluation of other potential adverse outcomes, and investigation of disease-specific outcomes.

Conclusions: Women with RA or AS may be at increased risk for having a premature or LBW baby, and of requiring a cesarean section delivery. This increased risk may be due to the disease process itself or medications used to treat the disease.

Public Health Implications: This information may be important for pre-pregnancy counseling and pregnancy monitoring.

ABSTRACTS

#27 - Session B3

WOMEN, INFANT, AND CHILDREN (WIC) PROGRAM PARTICIPATION AND THE EFFECT ON BREASTFEEDING PRACTICES IN LOUISIANA

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Background: Louisiana has one of the lowest breastfeeding rates during the first six months after delivery among US PRAMS states. The availability of formula and little breastfeeding support to WIC participants may have possible repercussions on breastfeeding practices among this population. The purpose of this study is to determine the relationship between WIC participation and breastfeeding in Louisiana's mothers during 1997 and 1999.

Methods: Louisiana's Pregnancy Risk Assessment Monitoring System (LaPRAMS) 1997-1998 data was used for the analysis. PRAMS questions included were those specific to breastfeeding behavior, Medicaid status, as well as social and demographic characteristics. SAS-callable SUDAAN 8.0 was used for statistical analyses. Multivariate logistic regression with hierarchical modeling that included main effects and two-factor interactions was used to determine the role of potential confounders. The alpha level was set at 0.05 for statistical significance.

Results: The mean duration of breastfeeding and percent of women who breastfeed at least week were higher among women without WIC (mean: 6.8 weeks, 95% confidence interval (95% CI): 6.2, 7.4); percent: 38.7, 95% CI: 35.7, 41.7) than those with WIC (mean: 1.9 weeks, 95% CI: 1.6, 2.2; percent: 10.4, 95% CI: 8.8, 12.0). When WIC participation was adjusted by other variables, it was not significant. The strongest predictor for not breastfeeding was education (OR 9.07, 95% CI 4.1, 20.2). Women who have smoked more than 100 cigarettes in their lifetime and smoke now have a higher risk of not breastfeeding or less than one week compared to those women who have smoked more than 100 cigarettes in their lifetime but do not smoke now (OR: 4.0, 95% CI: 2.5, 6.3).

Conclusion: WIC enrollment during pregnancy had no effect on breastfeeding, when adjusted by other socioeconomic variables. Low education, black race, and smoking were strong predictors of not breastfeeding in Louisiana.

Public Health Implications: Increased attention to education at all levels, especially among black women, may increase the rates of breastfeeding in the state. WIC participation was not associated with not-breastfeeding in the state, as had been proposed before.

ABSTRACTS

#28 - Session D3

THE IMPACT OF ADMINISTRATIVE CHANGES IN PUBLIC HEALTH SERVICES IN THE PRENATAL CARE (PNC) SERVICES AND ADEQUACY OF PREGNANT WOMEN IN LOUISIANA

Brandy K. Wallace MPH(1), Joan Wightkin Dr. Ph, MPH(1), Tri Tran MD, MPH(1); (1) Louisiana Office of Public Health.

Background: Starting in December 2000, there has been a consistent decrease in maternity visits for the statewide maternity parish health units as an initiative passed to have our low-income population using the Office of Public Health (OPH) clinics find other sources of care. This decrease greatly impacted the number of OPH initial PNC visits. The Maternal and Child Health program decided to investigate the impact of these changes in the state's level of prenatal care.

Methodology: Initial PNC visits are tracked through an encounter billing system (PH-9). Analyses of PH-9 data was done to evaluate changes in PNC during the time of administrative changes, and to evaluate the relationship to PNC adequacy (Kotelchuck index - KI) during 1997-1999, 2000, and 2001. ANOVA, Kappa test and alpha levels at 0.05 were used.

Results: The 25 parishes analyzed represented >95% of the births and PNC visits in the state. Mean PNC visits for 1997-1999 was 30.7% and KI = 73.2 %; 2000 mean PNC Visits was 25.5% and KI = 76.8%; and 2001 PNC Visits = 17.4% and KI = 76.4%. ANOVA was used for KI at the baseline (97-99), 2000, and 2001. For all the included parishes, the n
umber of visits was lower in 2001 than in 97-99 (p: 0.038). KI was not significantly different between the three groups. There was significant
concordance between those parishes with decreased PNC and lower KI (Kappa for 97-99 61% (p= 0.001); Kappa for the 2001group was 76% (p< 0.001).

Conclusion: Parishes where OPH initial visit numbers have decreased show significant concordance with a decrease in KI for those same parishes. Monitoring of those parishes for specific outcomes of pregnancy is important. Further studies are needed to link PNC characteristics and risk factors/outcomes at the state level.

Public Health Implications: Administrative changes in public health agencies must be monitored closelyas there might be important implications translated in a decrease in adequate services to the population.

ABSTRACTS

#29 - Poster Session

ASSOCIATION BETWEEN NEONATAL HOSPITAL LEVEL AND MORTALITY AMONG VERY LOW BIRTH WEIGHT (VLBW) NEONATES IN LOUISIANA FROM 1995 TO 2000.

Tri Tran MD, MPH, Brandy Wallace MPH..
MCH Epidemiologists, Louisiana Office of Public Health

Background: The implication of the neonatal hospital level on the risk of death of VLBW newborns has been an issue discussed in the state that has important implications for both public health and clinical practices. This study was done to assess hospital level on VLBW neonatal death risk and survival time for those newborns delivered in level I-II and level III hospitals.

Methods: Cohort linkage method was used to link 1995-1999 birth certificates with 1995-2000 infant death certificates. Less than 500 gm births were excluded. Multivariate logistic regression, survival curves, Log-Rank test, and Cox proportional Hazards models were used. Alpha levels were set at 0.05.

Results: More than 50% of deaths occurred on the first day of life (51.2 % in level III, 95% Confidence Limit [CL]: 47.0, 55.3; 56.8% in level I-II, 95% CL: 48.8, 64.7). Neonatal mortality rate (NMR) was much higher in level I-II (181.8 per 1000 live births, 95% CL: 152.5, 211.1) than in level III hospitals (111.5 per 1000, 95% CL: 105.9, 125.1). Mortality among level III VLBW neonates was associated with birth weight, gender, race, maternal age, prenatal care, and plurality in the multivariate models. However, among level I-II VLBW neonates, maternal age, prenatal care, and plurality were not associated. The rate of death was higher in level I-II than in level III hospitals (adjusted Hazard Ratio [HR]: 1.5, 95% CL: 1.1, 2.1) and white VLBW neonates (HR: 1.6, 95% CL: 1.4, 1.9). Short gestation and/or low birth weight, birth defects, respiratory distress syndrome of the newborn, and pulmonary atelectasis were ranked as top causes of deaths in both hospital levels.

Conclusion: Mortality among VLBW infants in the neonatal period is higher in level I-II hospitals after adjusted by the included confounders. The risk factors of death and survival time were different but main causes of death were similar between two hospital levels.

Public Health Implication: Better prenatal assessment of the risk for preterm delivery; expedite referral to higher-level institutions; and more aggressive intervention on the first day after delivery may decrease the number of VLBW deaths in level I-II hospitals.

ABSTRACTS

#30 - Poster Session

DESIGNING THE OPTIMAL FILE LINKAGE ALGORITHM

Tsai Mei Lin, M.S.
Center for Health Statistics, Arkansas Department of Health

Background: Linked files are more valuable than the sum of their parts, providing much more information than their constituent databases. Unfortunately, file linkage is much more of an art than a science and tends to involve highly subjective decisions on how to proceed. This presentation describes the development of algorithms that maximize the true-positive links and minimize false-positives, resulting in substantial labor savings.

Methods: A "gold-standard" file was created with 17 years (1985–2001) of linked Arkansas birth/infant death data, with 650,675 births and 6,193 infant deaths. Since all infant deaths are manually matched to birth certificates, this file represented an objective basis for measuring the validity of the file linkage algorithm. Using comparable variables from the birth and infant death certificates, a SAS program with a "looping" macro tested 24 separate variable combinations. The macro then removed the step that generated the fewest false-positives and the most true-positive links from the program and wrote out the linked records to another file. Repeating the process, the macro tested the remaining 23 steps against the remaining data and, once again, removed the optimal step and linked data. This continued until all steps were exhausted.

Results: Based solely upon names and addresses, and birth hospital identifier, the final algorithm achieved a
97.27 percent true-positive match rate with only .824 percent false-positives. Adding Social Security Number to the final algorithm had virtually no impact, increasing the true-positive rate to 97.46 percent and lowering the false-positives to .807 percent.

Conclusions: By identifying the most efficient steps and optimizing their order, very efficient file linkage algorithms can be developed using this SAS program. Surprisingly, very high rates of true positive links with few false positives can be achieved without truly unique identifiers such as Social Security Numbers.

Public Health Implications: File linkage is an increasingly important tool for public health research. Moreover, linked files can improve the effectiveness and efficiency of the delivery of public health services. The SAS code is available to interested researchers.

ABSTRACTS

#31 - Session D5

BREASTFEEDING INITIATION AMONG RACE/ETHNIC GROUPS AND ASIAN/ PACIFIC ISLANDER ETHNIC SUBGROUPS IN CALIFORNIA

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California Department of Health Services, Maternal and Child Health Branch Sacramento, California.

Background: A Healthy People 2010 (HP 2010) objective is to increase to 75% the percent of women who initiate breastfeeding in the early postpartum period. Although any breastfeeding may provide significant health benefits, the American Academy of Pediatrics recommends exclusive breastfeeding, including avoiding all supplements, such as water, glucose, and formula. This study compares any and exclusive in-hospital breastfeeding initiation among six race/ethnic groups and eleven Asian/Pacific Islander (A/PI) ethnic subgroups.

Methods: In-hospital breastfeeding initiation data were obtained from regularly reported genetic screening information collected from nearly every newborn in the state. Breastfeeding initiation data were categorized into women who exclusively breastfed their infants ("exclusive breastfeeding") and women who either exclusively breastfed their infants or supplemented breastfeeding with formula ("any breastfeeding"). Proportions and confidence intervals were calculated and chi-square tests performed.

Results: In 2001, five of the six major race/ethnic groups and six of the eleven A/PI ethnic subgroups exceeded the HP 2010 goal for initiating any breastfeeding. No group met this goal for exclusive breastfeeding. White, non-Hispanic women were most likely to do any (87.0%) and exclusive (64.1%) breastfeeding, while among A/PI ethnic subgroups, Japanese women were most likely to do any (94.2%) and exclusive (63.2%) breastfeeding. Cambodian (55.6%) and Laotian (53.1%) women were least likely to do any breastfeeding and Cambodian (14.4%), Vietnamese (18.7%), and Laotian (19.8%) women least likely to exclusively breastfeed. Although Hispanic women had one of the highest any breastfeeding rates (82.7%), their exclusive breastfeeding rates were the lowest (30.0%) among the six major race/ethnic groups.

Conclusion: Both any and exclusive breastfeeding initiation practices should be considered when assessing progress towards increasing breastfeeding initiation. Reporting breastfeeding initiation rates with a broadly defined A/PI category masks substantial variation in rates within this population.

Public Health Implications: Culturally appropriate interventions supporting breastfeeding initiation should be targeted in hospitals and communities serving women of Southeast Asian ethnicity. Educational efforts are needed to promote exclusive breastfeeding among all populations, with specific targeting toward Hispanic mothers.

ABSTRACTS

#32 - Session A5

SMOKING BEHAVIOR AND DIETARY CONSUMPTION: DO ADOLESCENTS WHO SMOKE EAT LESS FRUITS AND VEGETABLES THAN THEIR NON-SMOKING PEERS?

Cynthia Kent Childs, MPH Student, University of Rochester, Department of Community and Preventive Medicine

The negative health effects of smoking can be compounded by a poor diet, and adolescents are generally more likely to have poor eating habits than other age groups. The purpose of this investigation was to ascertain the association between smoking status and fruit and vegetable intake. Most studies that deal with fruit and vegetable intake and smoking patterns among teenagers include only females. This study looked at both males and females. Using the Youth Risk Behavior Survey (YRBS) data for Monroe County, New York, we hypothesized that adolescent non-smokers would eat more fruits and vegetables than adolescent smokers. We explored differences in sex, age, and race/ethnicity. YRBS data from Monroe County for both 1999 and 2001 were used for analysis. Statistical Analysis Descriptive statistics for demographics and smoking status were performed. Bivariate associations between smoking status and fruit and vegetable intake were tested by chi-squared tests. Smoking status was stratified by sex, age, and race.

Results: Most adolescents who answered the YRBS survey do not eat the recommended daily allowance of fruits and vegetables—86.4% of all respondents, regardless of smoking status, eat less than five servings a day of fruits and vegetables; about 21% eat less than one serving per day! The difference in fruit and vegetable intake between smokers and non-smokers was not statistically significant. Race showed a statistically significant difference in fruit and vegetable intake by smoking status. White smokers ate less fruits and vegetables than White non-smokers. Black and Hispanic smokers tended to eat more fruits and vegetables than their non-smoking peers.

Discussion: Smoking status, sex, and age alone had no bearing on the fruit and vegetable intake of teenagers. When smoking status was stratified by race the results became significant. The most striking finding was that Black and Hispanic smokers report eating more fruits and vegetables than non-smoking Blacks and Hispanics, respectively. The opposite association was true for White adolescents. Public Health Implications In this sample, very few adolescents eat the recommended number of servings per day of fruits and vegetables, regardless of smoking status. Smoking status does not predict fruit and vegetable intake unless stratified by race.

ABSTRACTS

#34 - Poster Session

WHAT FATHERS NEED: A COUNTYWIDE ASSESSMENT OF THE NEEDS OF FATHERS OF YOUNG CHILDREN

Anand Chabra, M.D., M.P.H., San Mateo County Health Services Agency, Sara Buckelew, M.D., M.P.H., UCB/UCSF Joint Preventive Medicine Residency Program

Background: The Fatherhood Collaborative of San Mateo County conducted a countywide needs assessment to determine the personal needs of fathers and the community resources that would help them become better fathers.

Methods: Qualitative data collection strategies included community topical dialogues, key stakeholder interviews, and case management chart reviews. We conducted nine focus groups (n=80), 16 key stakeholders interviews, and 20 case management chart reviews. Twelve hundred 35-question surveys was administered to collect quantitative data from fathers (response rate=20%).

Findings: Eighty-five percent of the 240 fathers surveyed had a child under age five. Fathers prioritized financial assistance (35%), housing (20%), healthcare (20%), food (19%), and employment (18%), as current individual needs. Eight percent of dads with a child under age five reported lacking health insurance. Only 5% of the dads of young children needed health care, while 7% of all dads indicated this need. Two percent of dads indicated their children were uninsured and 10% needed health care. Seventeen percent of dads indicated that they were currently sad, depressed or overly stressed but only 22% of these indicated that they had seen a mental health specialist. Other health related needs that fathers were surveyed about included current need of family planning (5%), and smoking cessation (4%) services. Both the qualitative and quantitative data assessed available support for fathers. Approximately 75% of fathers surveyed indicated that they had enough support or information during the first year of their child's life. Sixty-three percent indicated that they could ask their wife, girlfriend or partner about how to raise their children. Fifty percent of fathers surveyed thought their community was "good" to "excellent" as a place that supports fathers in the raising of their children. Prioritized county services sought included father-child activities (47%), parks/ recreational activities (37%), better schools (35%), parenting classes (33%) and support groups for fathers (25%). Focus group participants identified additional needs, including childcare, family counseling and transportation.

Conclusions: There is a paucity of data around fatherhood. This assessment is one community's attempt to identify the needs of fathers of young children and will be used by agencies and organizations to expand services for fathers.

ABSTRACTS

#36 - Session C4

BACKGROUND AND BARRIERS TO UNDERSTANDING AND TRACKING MATERNAL/FETAL INJURY

Harold (Hank) Weiss, PhD, MPH, MS
Center for Injury Research and Control, University of Pittsburgh

Background/Objectives: With the amelioration of the infectious scourges and complications of childbirth, concomitant with major changes in the societal role of women, injury during pregnancy has assumed much more importance to maternal and child health. The resulting changes means that injuries, led by motor-vehicles, have become the leading cause of maternal death during pregnancy and traumatic fetal death a leading cause of injury death below age 9. This talk presents the backdrop and context on the issue of maternal injuries and adverse fetal and child outcomes in order to communicate a better understanding of the extent and seriousness of the problem, but also the difficulties addressing this problem.

Methods: The presentation will cover the questions: How and what do we know about maternal injuries and associated adverse fetal outcomes? Who is affected and what are the mechanisms of morbidity and mortality? How does this problem compare to other child injury and reproductive and maternal health issues? What are the barriers to knowing more? What are the key research and surveillance needs?

Results: *In utero* injury exposure occurs in hundreds of thousands of pregnancies every year, yet researchers and practitioners have not paid much attention to injuries during this critical period. Why is this? Probably because of: 1) Deficiencies in the way fetal trauma-related deaths are coded in vital statistics, 2) The lack of pregnancy status in injury surveillance systems, 3) Unfamiliarity by health researchers with the large societal burden of injury, 4) Unfamiliarity by many injury scientists with reproductive health, and 5) The difficulty attributing adverse birth outcomes and developmental problems years after the trauma.

Conclusions: Various barriers have lead to the situation that research and prevention resources have not been allocated commensurate with the seriousness of the problem of injury during pregnancy and few prevention efforts have been aimed at this population. This talk sets the stage for the follow-up presentations on methods to address maternal injury surveillance.

Public Health Implications: More attention needs to be directed to the surveillance and prevention of maternal injuries despite the lack of adequate surveillance in current MCH data systems.

ABSTRACTS

#37 - Session C4

PREVALENCE & RISK OF PREGNANCY-ASSOCIATED INJURY HOSPITALIZATIONS: A POPULATION-BASED APPROACH

Harold B. Weiss, PhD, MPH[1], Bruce A. Lawrence[2], Ted R. Miller, PhD[2], [1]Center for Injury Research and Control, University of Pittsburgh, [2]Pacific Institute for Research and Evaluation, Calverton, Maryland, USA.

Problem: Few surveillance system characterize pregnancy status of injured women, though injury and pregnancy rates are high in young women. Without such information, little is known about injury mechanisms during pregnancy, their prevalence, severity, and trends.

Objectives: To estimate the prevalence of pregnancy-associated hospitalized injuries, identify the causes of serious maternal injury and compare rates between pregnant women and all women of reproductive age, adjusted for age and severity.

Methods: Using 1997 hospital discharge data from 19 states representing 52% of the U.S. population of reproductive-age women (36 million women and 1.9 million births), records were classified as injury-related with and without coexistent pregnancy-associated diagnoses.. Pregnant women were compared to all women.

Results: The E-coding was 92% complete among women with an injury-related diagnosis. This left 137,887
women ages 15-49 discharged from non-rehabilitation hospitals with an injury and E-code. Among these women, the screen identified 5,498 (4.0%) pregnancy-associated injury discharges. The non-severity adjusted rate ratio, pregnancy-associated over non-pregnancy-associated, was 1.24 (95% CI=1.13, 1.28). The leading injury mechanisms among pregnant women were transportation-related, (32%), falls (21%), poisonings (16%) and struck by or against (8%). Among cases with a pregnancy-associated diagnosis, 14% (745/5,498) were assault-related while for all injured women it was 5% (7,402/137,887). Pregnancy-associated injured women were younger and more likely to be non-white. The median charge per visit was $4,206 for pregnant women and $5,872 for all women. The average length-of-stay was shorter for the pregnancy-associated injured women. Once adjusted for severity, most mechanism rate ratios were below one or not significantly different from 1, except for firearm related injuries (rate ratio = 1.48, 95% CI=1.10, 1.97).

Conclusions: Much of the apparent risk to pregnancy-associated cases is due to lower hospital admission thresholds. For most mechanisms, once adjusted for severity, pregnancy appears to be associated with decreased risk. The only exceptions are firearm related injuries.

Public Health Implications: This technique to track injuries during pregnancy could be employed by any state with adequately E-coded hospital discharge data. Such understanding would assist in identifying circumstances and trends in injuries posing a substantial threat to maternal health and fetal well-being.

ABSTRACTS

#38 - Session C4

PREGNANCY, INJURY, AND BIRTH OUTCOMES: LINKING BIRTH/FETAL DEATH RECORDS TO HOSPITALIZATION DATA

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University of Washington, School of Public Health & Community Medicine

Background: Few population-based studies have assessed maternal and infant outcomes after non-fatal injuries occurring during pregnancy.

Methods: We performed a retrospective cohort study to assess outcomes of pregnant women hospitalized for injury in Washington State from 1989-1997. We identified pregnant women hospitalized for injury who had a singleton live birth or fetal death by linking Washington State birth and fetal death certificate data with hospitalization data using a probabilistic linkage technique. We defined injury as any of the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9CM) injury diagnosis codes 800 to 959.99 or an external causation code (E code). We evaluated pregnancy outcomes using information on the birth or fetal death certificate and ICD-9CM codes in the hospitalization data. We compared injured pregnant women to 12,578 pregnant women randomly selected from Washington State birth and fetal death certificates who had no injury hospitalizations during pregnancy. We used Poisson regression to estimate the relative risk (RR) and 95% confidence interval (CI) for associations between injury and adverse pregnancy outcomes, adjusting for maternal education, smoking, and trimester of prenatal care.

Results: We found 1525 pregnant women who were hospitalized for injury during pregnancy, with 1037 hospitalized and discharged undelivered and 488 delivered at their injury hospitalization. Among those who were hospitalized for injury during pregnancy, 72.1% (1099/1525) were identified using an ICD-9CM injury code and 88.4% (1348/1525) using an E code. The most common mechanisms of injury included motor vehicle crashes (N= 410), falls (N=393), and assaults (N=118). Injured pregnant women were at increased risk of preterm labor (adjusted RR 2.8, 95% CI 2.3-3.4), placental abruption (RR 3.7, 95% CI 2.5-5.4), and their infants were at increased risk of low birth weight (RR 1.5, 95% CI 1.1-2.1), fetal distress (RR 1.2, 95% CI 1.0-1.6), and respiratory distress syndrome (RR 2.0, 95% CI 1.2-3.5).

Conclusions: Injuries resulting in hospitalization during pregnancy can result in adverse maternal and infant outcomes.

Public Health Implications: Injuries during pregnancy represent a serious public health problem that should be addressed through injury prevention strategies.

ABSTRACTS

#39 - Session C4

PREGNANCY-ASSOCIATED CRASHES AND BIRTH OUTCOMES: LINKING BIRTH/FETAL DEATH TO MOTOR VEHICLE DATA

Lawrence J Cook, Intermountain Injury Control Research Center

Problem: Motor vehicle crashes (MVC) are the leading cause of traumatic fetal mortality. It has been estimated that about 2% of all live births in the U.S., or 79,000 children (rate = 26/1,000 person-years), are exposed in-utero to a police-reported crash. For comparison, NHTSA reports that there are only about 23,188 infants reported in crashes each year (rate = 6/1,000 person-years). While crashes involving pregnant women can cause obvious immediate harm such as placental abruption, uterine rupture, or emergency premature delivery, less is known about delayed effects of MVC on other pregnancy outcomes.

Objectives: To determine medical and birth characteristics present among newborns of mothers involved in an MVC during pregnancy.

Methods: Statewide MVC, birth, and fetal death records from 1992 to 1997 were probabilistically linked to determine which mothers had been involved in an MVC during pregnancy. Logistic regression was used to compare birth outcomes including low birth weight, complications of labor and/or delivery, and abnormal conditions of the newborn while controlling for several birth risk factors and crash variables.

Results: Out of the 322,614 birth mothers, 8,940 (2.8%) had been in a crash during pregnancy. When compared to pregnant women who were not in a crash, we found that non-belted pregnant women in crashes were slightly more likely to have a low birth weight infant (OR=1.30, 95% CI=1.03, 1.64). Also, compared to belted women in crashes, unbelted women were more likely to experience excessive bleeding during delivery (OR=2.06, 95% CI=1.02, 4.15). We found no difference between pregnant women who were in a crash wearing a seatbelt and pregnant women who were not in a crash. An unadjusted odds ratio showed that unbelted women were 2.8 times more likely to experience a fetal death following an MVC than belted women (95% CI 1.4, 5.6).

Conclusions: This study shows in-utero MVC can pose a significant risk to fetuses. Seatbelt use during pregnancy may reduce the risk of adverse outcomes for the fetus following a MVC.

Public Health Implications: Probabilistic linkage is a useful method for combining public health databases to study pregnancy outcomes following a motor vehicle crash.

ABSTRACTS

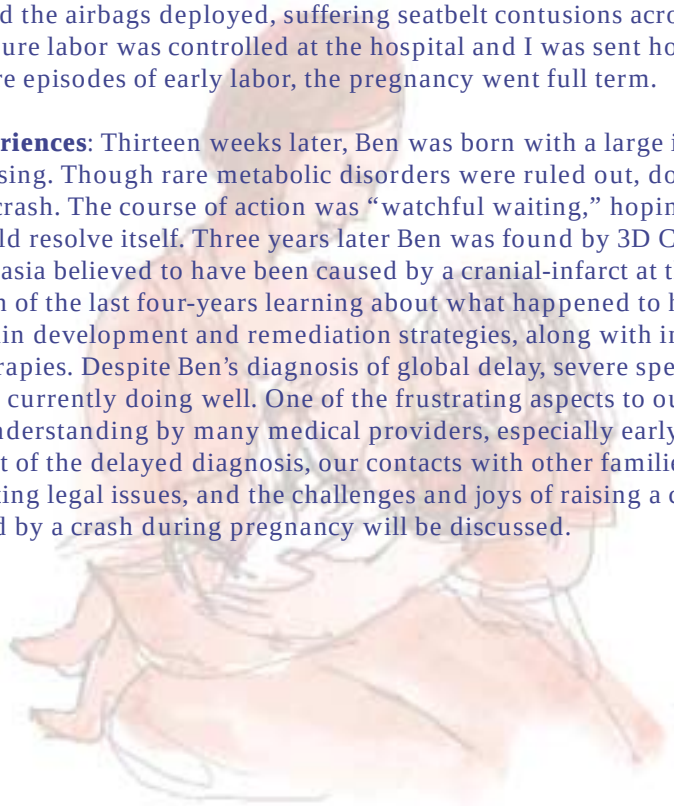
#40 - Session C4

FETAL TRAUMA: A MOTHER'S STORY

Monica Randall, BA, Kennewick, Washington

Background: Our family's introduction to the topic of injury and pregnancy occurred in May, 1995 when I was 26 weeks pregnant with my son, Ben. We were in our Ford Taurus traveling approximately 50 MPH when we were hit head-on by a drunk driver. I was belted in the front-passenger seat and the airbags deployed, suffering seatbelt contusions across my shoulder and abdomen. Premature labor was controlled at the hospital and I was sent home after 12 hours. Though there were episodes of early labor, the pregnancy went full term.

Results and Experiences: Thirteen weeks later, Ben was born with a large irregular-shaped piece of skull missing. Though rare metabolic disorders were ruled out, doctors were hesitant to relate it to the crash. The course of action was "watchful waiting," hoping that the deformation would resolve itself. Three years later Ben was found by 3D CT/MRI to have right-cerebellar-hypoplasia believed to have been caused by a cranial-infarct at the time of the crash. I have spent much of the last four-years learning about what happened to him, researching and reading about brain development and remediation strategies, along with implementing various rehabilitation therapies. Despite Ben's diagnosis of global delay, severe speech delay, and low muscle tone, he is currently doing well. One of the frustrating aspects to our story was the lack of support and understanding by many medical providers, especially early in the episode. The nature and impact of the delayed diagnosis, our contacts with other families suffering similar tragedies, frustrating legal issues, and the challenges and joys of raising a child with serious disabilities caused by a crash during pregnancy will be discussed.



ABSTRACTS

#41 - Poster Session

MATERNAL CONTACT WITH LAW ENFORCEMENT IN SAN BERNARDINO COUNTY AND DEATH OF INFANTS FROM SUDDEN INFANT DEATH SYNDROME (A CASE CONTROL STUDY)

Oluwatoyin Akinpelu, M.P.H., San Bernardino County, Department of Public Health

Background: An earlier study showed associations between all 1990 post-neonatal infant deaths from sudden infant death syndrome (SIDS) and the previous contact of mothers to the law enforcement in San Bernardino County. We proceeded to obtain data for years 1991-1997 and conducted analysis to identify associations for mothers whose infants had died from sudden infant death syndrome.

Methods: Infants (cases) that died from SIDS in San Bernardino County in 1991-97 were identified from the California birth cohort files. Controls were infants who did not die during this period. Cases were matched to controls born within 30 days of a case¡¦s birth, in the same birthweight category. Two controls were matched to a case. Personal identifiers of mothers were retrieved from local birth files and sent to the County¡¦s Sheriff¡¦s Department for blinded review to match with law enforcement records contained in the central names index database (CNI). Contacts for mothers of cases were sought before the death of the child and contacts of controls were cut off at a similar age. Chi-square analysis of data was carried out using SAS. Twenty-three categories of exposure were studied.

Results: Sixteen categories out of the 23 studied (including if mother was arrested, arrested for a violent crime, arrested for a penal code violation, arrested for a health and safety code violation, and suspect of a violent crime), gave significant associations between the death of infants from SIDS and if their mothers had contact with law enforcement before their death. From the multiple significant associations to be presented, contact for a “violent” crime had the highest risk (Odds ratio=4.99, p=.0002).

Conclusions: Results confirm the value of thorough studies on the specific associations of SIDS deaths. Contact with law enforcement could be an index for poor parenting skills.

Public Health Implications: This study confirms the value of the information contained in the CNI and the potential for public health purposes. Collaboration between the public health department and the Sheriff¡¦s department was crucial for this effort. Through proper planning, high-risk mothers could be targeted via the CNI and educated on good parenting skills.

ABSTRACTS

#42 - Session A3

RACIAL DISPARITIES IN LATE FETAL DEATHS, UNITED STATES-1995-1998

Wanda D. Barfield, MD, MPH, Jason Hsia, PhD, Kay M. Tomashek, MD, MPH, Lisa Flowers, BA, Solomon Iyasu, MBBS, MPH, Centers for Disease Control and Prevention

Background: Nearly 13,000 late fetal deaths (≥ 28 weeks gestation) occur annually in the United States, yet they are seldom studied. We examined late fetal deaths and associated maternal risk factors to understand current racial disparities and focus on prevention strategies.

Methods: We analyzed singleton late fetal deaths using U.S. perinatal mortality data (1995-1998). Unknown gestational ages were excluded (< 2%). We compared late fetal death rates (rate = fetal deaths ≥ 28 weeks gestation per 1,000 live births plus fetal deaths ≥ 28 weeks gestation) by maternal demographics, prenatal care, smoking, fetal characteristics, selected maternal medical conditions and labor/delivery complications using univariate analyses and adjusted odds ratios (95% C.I.).

Results: During 1995-1998, there were 49,435 late fetal deaths (rate = 3.3 fetal deaths ≥ 28 weeks gestation per 1,000 live births plus fetal deaths ≥ 28 weeks gestation). Rates of fetal death were higher for black mothers compared to white mothers [RR=1.8 (95% C.I. = 1.7, 1.9)], mothers aged 40 years or more compared to mothers aged between 20-34 years [RR=2.1 (95% C.I. = 2.0, 2.2)], and mothers who had no prenatal care compared with mothers with 1st trimester initiation [RR=5.1 (95% C.I. = 4.9, 5.4)]. Mothers who smoked more than 2 packs/day had higher risks of fetal death compared to non-smokers [RR=5.5 (95% C.I. = 4.0, 7.4)]. Selected medical risks (anemia, diabetes, chronic hypertension, eclampsia) and complications (abruption, cord prolapse, seizures during labor) were more likely to be associated with fetal deaths when compared to deliveries without these reported events. After adjusting for maternal age, smoking, prenatal care, and maternal medical risks/complications, the odds for fetal death among black women compared to whites decreased [black/white OR=1.3 (95% C.I. = 1.2, 1.4)].

Conclusions: Maternal chronic illness, increased maternal age, smoking, and limited prenatal care increase the risk for late fetal deaths.

Public Health Implications: These findings suggest that in order to reduce late fetal deaths and associated racial disparities, policies and programs are needed to improve women's health prior to pregnancy, prevent maternal cigarette use, and provide quality preconception and prenatal care.

ABSTRACTS

#43 - Session C3

USING LOCAL RESEARCH TO DEVELOP COMMUNITY INTERVENTIONS TO REDUCE PRETERM LOW BIRTH WEIGHT BIRTHS

Leisa J. Stanley, PhD, MS, Healthy Start Coalition of Hillsborough County, Inc.

Background: Preterm and low birth weight births have remained relatively unchanged during the past decade. Yet, these births are costly both monetarily and in terms of a child's developmental course. The Healthy Start Coalition and St. Joseph's Women's Hospital conducted a study in order to investigate the strength of association and prevalence of risk factors associated with preterm, low birth weight births and to develop strategies at the local level to address significant risk factors.

Methods: A case-control study of preterm low birth weight births was conducted. Medical records were abstracted from the following areas: medical and obstetrical history, pregnancy complications, maternal behavior during pregnancy and pregnancy outcomes. There were a total of 279 cases and 812 controls.

Results: Models were developed to calculate the odds ratios using logistic regression analyses. Alcohol and drug use had the strongest association with an OR of 10.3 (CI=3.935,26.831). Smokers had a 2.5 (CI=1.586,3.988) higher risk of preterm low birth weight than nonsmokers. Due to low power, ATOD use was not significant in multivariate models. Vaginal infections had a strong association at 6.10 (CI=4.256,8.799). However, the adjusted OR was reduced by 67% after controlling for confounders. The adjusted OR for urinary tract infections (OR=3.48;CI=1.88,6.42) remained the same even in multivariate models. Any sexually transmitted infection had an OR of 2.1 (CI=1.409,3.264), but was not significant in multivariate models.

Conclusions: The results of the study were presented to a hospital committee and a community planning committee. From these meetings, the following strategies are being implemented at both the community and clinical levels: a pilot project to implement universal ATOD screening, assessment and referral during the prenatal visit; a prevalence study of alcohol and drug use during pregnancy; and doctor and patient education on the role of infections, appropriate screening protocols and preterm labor.

Public Health Implications: The interface between community-based providers and the medical community is crucial to addressing the multi-factorial etiology of preterm low birth weight births.

ABSTRACTS

#44 - Session B1

THE EFFECT OF COLLOCATION OF WIC AT MANAGED CARE ORGANIZATION SITES: IDENTIFICATION OF A SIMPLE REFERRAL PROCESS

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Background: The use of managed care organizations (MCOs) by Medicaid has raised concerns as to whether this use will limit coordination with public health, education, and social services systems such as WIC. The purpose of this study was to evaluate whether collocation of WIC at MCO sites could improve pregnancy outcomes and to design an intervention program that would enable non-collocated WIC sites to identify pregnant women in need of additional assistance.

Methods: We identified 37,654 pregnant women certified for WIC in Detroit between March 1996 and December 1998 who gave birth to singleton infants. Women were categorized into five groups based on the MCO and WIC sites they used. WIC records were used to identify the outcome, low birthweight or preterm delivery, as well as potential confounding factors. Multivariate logistic regression was used to evaluate the association between collocation and pregnancy outcome. Based on these results, a one-page form for use at non-collocated sites was designed to identify and refer pregnant women in high-risk situations for additional services.

Results: Women who used a collocated site with an internal referral process had a decreased risk of low birthweight or preterm delivery as compared to women who used three other non-collocated sites, after adjustment for WIC certification before July 1, 1997, welfare status, and first child on WIC (OR=0.82 [0.71-0.94], OR=0.85 [0.73-0.98], OR=0.94 [0.79-1.11]). Initiation of a one-page referral form for use at non-collocated sites resulted in a high rate of referrals to outreach support staff.

Conclusions: Effective internal coordination can improve pregnancy outcomes. A simple process of referral screening at both collocated and non-collocated sites can enable high-risk women to receive the healthcare and support services they need.

Public Health Implications: Information provided during WIC certification visits can be used as a surveillance mechanism to identify women in need of assistance in obtaining healthcare or support services. Simple procedures can be established to enable WIC staff to actively communicate with other programs about these women.

ABSTRACTS

#45 - Session D2

A GLOBAL ANALYSIS OF THE INVERSE ASSOCIATION OF NATIONAL CONTRACEPTIVE PREVALENCE AND MATERNAL MORTALITY RATES

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Background
On a global perspective, due to its extent and opportunity for prevention, maternal mortality has often been referred to as a "neglected tragedy." In 1996, the WHO estimated global maternal mortality to be 585,000 deaths annual with 99 percent occurring in low-income nations.
Prevention and risk reduction strategies are known. Pregnancy prevention is one method to improve the health status of women and reduce the risk of maternal deaths. Since the early 1960s, the estimated global number of total contraceptive users has increased from less than 30 million people to currently close to one billion people with 60 percent contraceptive prevalence among married women aged 15-49.
The goal of this ecological study and secondary data analysis was to determine if an inverse association between national contraceptive prevalence (CPR) and maternal mortality rates (MMRate) is present when utilizing national summary data.

Methods
The analysis was conducted in Excel utilizing national data of 126 countries published by the Population Reference Bureau. A scatter diagram was plotted and linear regression was used to calculate an expected trendline. A tabular array of countries by MMRate and CPR was made to identify groups of countries and outliers that might have common characteristics.

Results
The linear regression analysis indicated a strong linear relationship between the two variables ($r=-0.78$, $p<0.001$) and determined that when contraceptive prevalence increases by 1 percentage point, the MMRate will decrease by 45.2 maternal deaths per million women (aged 15-49). Therefore, the model suggests if the global CPR increases by 1 percentage point to 61, the MMRate may decrease by 45.2 maternal deaths, from 334.1 to 288.9 per million women (aged 15-49), preventing 72,000 maternal deaths per year.

Conclusions
The analysis also resulted in several observed regional correlations of nations and led to further hypotheses suggesting that environmental and cultural factors may be impacting maternal mortality. Three regional groups were of specific interest: oil-wealthy, Middle East nations; non-northern African nations; and Eastern European and former Soviet Republic nations.

Public Health Implications
This analysis identified an inverse association of national MMRates and CPR and regional groupings of nations which may assist in preventing maternal deaths.

ABSTRACTS

#46 - Session B3

COMPARISON OF PRAMS SELF-REPORT OF SELECTED PREGNANCY MORBIDITIES WITH BIRTH CERTIFICATE RECORDS

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Background: Conventional thought in using morbidity data on birth certificates is to proceed with caution. Many studies have been done to assess the validity of information on birth certificates, most concluding that birth certificates underestimate the prevalence of complications of pregnancy. The purpose of this study was to assess the data quality of maternal risk and labor complications reported on Utah birth certificates through comparisons with same information obtained from the PRAMS survey.

Methods: In order to assess discrepancies in the data quality of maternal morbidities, Utah birth certificates were compared with self-reported measures in the -PRAMS 2000 survey. Comparisons were made for a number of morbidities: incompetent cervix, diabetes, gestational diabetes, premature rupture of membranes, abruption, and placenta previa. Previous birth outcomes of preterm labor and small for gestational age were also compared. When a morbidity item was found in both data sources or not found in either source, it was considered to be an "agreement".

Results: The agreement between PRAMS self report and birth certificate data ranged from a low of 88.2% (previous premature infant) to a high of 98.1% (incompetent cervix). Disagreements were mostly attributed to PRAMS respondents indicating they had the morbidity without it being reported on the birth certificate. There was no substantial variation in the disagreements across demographic characteristics of the population.

Conclusion: This study was undertaken to evaluate the reporting accuracy of morbidities in two data sources. Even though a high agreement was found for certain morbidities, caution should be used to report all maternal morbidities solely from birth certificate. Efforts should be made to enhance more accurate reporting on birth certificate.

Public Health Implications: Birth certificate data may under-report the prevalence of maternal morbidities. This study provides guidance for improvement of vital records reporting in Utah.

ABSTRACTS

#47 - Session A3

INFANT MORTALITY, PERINATAL PERIODS OF RISK, AND RACIAL DISPARITIES IN THE JACKSON METROPOLITIAN AREA

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Background: The Jackson Metropolitan Area's (JMA) Infant Mortality Rate (IMR) 1997-1999 was 10.6/1,000 live births (U.S.= 7.2). Perinatal Periods of Risk (PPOR) was applied to investigate factors that contribute to JMA's high IMR and to provide direction for future community interventions.

Methods: We used PPOR to examine the feto-infant mortality rates (FIMR) and assess the respective mortality distributions in four categories: Maternal Health/Prematurity, Maternal Care, Newborn Care, and Infant Heath. PPOR was conducted using a file of singleton fetal deaths (≥24 weeks gestation) and live births/deaths (≥500 grams) occurring from 1997-1999 in JMA. Asians, American Indians, and Hispanics were not included in the analysis due to too few (<60) deaths (a PPOR requirement). The overall, white, and black populations were compared to a low risk internal reference group (RG): Mississippi white women aged ≥20 years with ≥13 years of education. The black population was further divided into two groups by education level and compared to the RG. Blacks who had ≥13 years of education were classified as higher educated blacks, and blacks who had <13 years of education were grouped as less educated blacks.

Results: The FIMR for the RG was 7.5/1,000 live births and fetal deaths compared with JMA's overall 13.2. Analysis by race showed disparity between races (black=17.6, white=7.7) with large gaps in the categories Maternal Health/Prematurity (black=7.9, RG=2.4), Maternal Care (black=4.1, RG=1.9), and Infant Health (black=3.7, RG=1.6). Racial disparities did not exist in the category of Newborn Care. Additional analyses revealed a significant difference between higher and less educated blacks in the Infant Health category (Relative Risk (RR): 2.2, Confidence Interval (CI): 1.1-4.7). When compared to the RG, higher educated blacks did not have significant excess mortality in the Infant Health category (RR: 1.3, CI: 0.7-2.7), whereas less educated blacks did (RR: 3.0, CI: 1.9-4.7).

Conclusions: Racial disparities existed in three categories: Maternal Health/Prematurity, Maternal Care, and Infant Health. Educational disparities were found among blacks in Infant Health.

Implications: Future intervention efforts should target black Maternal Health/Prematurity (preconceptional health), Maternal Care, and less educated black Infant Health (SIDS prevention activities, breastfeeding promotion, and injury prevention).

ABSTRACTS

#48 - Session E7

BIRTHWEIGHT: DO AGE, WEIGHT GAIN, AND BODY MASS INDEX MATTER?

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Background: A 1996 HRSA/MCHB expert panel reviewed the maternal weight gain literature, concerned that "few studies have dealt with the effects of biological factors on maternal weight gain." Their Recommendations for Research suggested that investigators "Examine the extent to which adolescents transfer their weight gain to the fetus and compare the findings to those in adults" and "Identify differences and similarities among various racial and ethnic groups."

Methods: Arkansas PRAMS (Pregnancy Risk Assessment Monitoring System) data for 1997-2001 were used, with 7106 cases having complete information. Logistic regressions were performed. The dependent variable was birthweight (<2500 grams/ ³2500 grams). The independent variables were maternal age (<20 years/³20 years), race (white/black/other), pre-pregnancy body mass index (BMI – underweight/normal/overweight/obese), and maternal weight gain (below recommended, recommended, above recommended).

Results: In the full model, all independent variables were significantly related to birthweight. Weight gain and race were highly significant (P=<.0001), BMI less so (P=.0047) and age modestly (P=.0225). All independent variables were tested in two-way interactions. Only BMI X weight gain was significant (P=.0060). Therefore, the analyses were repeated for each of the four BMI categories. Age was not significantly related to birthweight in any of the models. Race was significant for women in BMI categories normal and obese. Weight gain was significant for women with BMI categories of underweight, normal and overweight.

Conclusions: The impact of age on birthweight disappears in the four BMI-specific analyses. Underweight BMI women with below recommended weight gain are at highest risk of low birthweight births (OR=3.829). Surprisingly, overweight BMI women were also at risk (OR=1.855). Conversely, normal BMI women with above recommended weight gain were at less risk (OR=0.310). Black women experience high risk of low birthweight births, especially in BMI categories obese (OR=2.095) and Normal (OR=1.753). Recommendations: Confirm findings with larger sample and more detailed age categories.

Public Health Implications: More specific maternal weight gain counseling is needed for pregnant women, especially African-Americans. This analysis does not confirm the need for special counseling for adolescents

ABSTRACTS

#49 - Poster Session

FETAL AND INFANT MORTALITY REVIEW (FIMR): USING QUALITATIVE DATA TO ADDRESS ISSUES RELATED TO HEALTH DISPARITIES.

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Background: The US infant mortality rate decreased to 6.9 in 2000, approaching the 2010 national goal of 4.5 infant deaths per 1,000 live births. However, this decrease is not uniform across many of the nation's communities. Infants born into poor families are still twice as likely to die as those born to families above the poverty level. The African American community incurs the greatest disparity in infant mortality with the rate, at least, double that for white infants.

Methods: Qualitative FIMR information complements local population-based fetal and infant mortality data. It identifies critical community strengths as well as unique health/social issues associated with disparities in outcomes. New research confirms the importance of the inclusion of such qualitative information to analyze disparities. Specifically, that qualitative information includes: 1) collective analysis and decision involving the whole community; 2) input from community key informant interviews and 3) re-examination of stress and social support as they relate to preterm births. The FIMR program is a model that builds community decision-making capacity. FIMR sponsors key informant interviews of mothers who have experienced a loss and views that information as key to understanding community issues associated with health disparity. Finally, the NFIMR home interview survey has always included questions about stressors and social support.

Results: Six examples of FIMR community actions to address disparities in infant outcome will be described. Actions will address pre-term labor, SIDS risk reduction and cultural competence.

Conclusions: The qualitative FIMR methodology offers a unique strategy for analyses of individual and community factors, which significantly affect health disparities and are not discoverable through analyses of population based data.

Public Health Implications: Local health departments that implement FIMR are able to use this qualitative methodology to complement population-based data and produce locally significant interventions to reduce disparities in infant health.

ABSTRACTS

#50 - Session D5

THE EFFECT OF RISK FACTORS TO PREDICT BREASTFEEDING INITIATION IN A WIC POPULATION

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Background: Women eligible for the Supplemental Nutrition Program for Women, Infants, and Children program (WIC) have characteristics associated with women who historically are less likely to breastfeed. In order to move toward the Healthy People 2010 objective of 75% of mothers who initiate breastfeeding postpartum, the Illinois Department of Human Services (IDHS) conducted this study to identify the relationship between demographic, behavioral and nutritional risk factors and breastfeeding initiation to more effectively target WIC counseling and education.

Methods: Data were obtained from the State of Illinois Cornerstone Data System, a data warehouse connecting city, county, and state health departments. The population (N=55,254) consisted of women active in WIC who had a live birth between July 1, 2001 and June 30, 2002. Nutritional risk factors generated from health assessments and used to determine eligibility and program service priority were analyzed. Data on smoking and breastfeeding initiation were validated using Pregnancy Risk Assessment Monitoring System (PRAMS). Predictors of breastfeeding initiation were evaluated using logistic regression.

Results: Consistent with earlier studies examining traditional risk factors, a woman was less likely to initiate breastfeeding in the hospital if she was non-Hispanic (adjusted Odds Ratio (aOR) 0.38, 95% Confidence Interval (C.I.) 0.36-0.40), black (aOR 0.71, C.I . 0.66-0.76), single (aOR 0.66, C.I. 0.63-0.69), < high school education (aOR 0.58, C.I. 0.54-0.62), aged <20 years (aOR 0.84, C.I. 0.77-0.92) and multiparous (aOR 0.70, C.I. 0.67-0.73). In terms of risk factors, women who reported smoking were significantly less likely to initiate breastfeeding (aOR 0.70, C.I. 0.67-0.75) adjusted for sociodemographic confounders. Low hemoglobin/hematocrit, short interconceptional period, BMI > 26.1, and Caesarean birth were not associated with initiation of breastfeeding. 68.0% were 20 or older. Using logistic regression modeling, unintended pregnancies were 78% (95% C.I. 0.53-1.14) more likely to have a VLBW infant (<1500 grams) than an intended pregnancy when controlling for maternal age, race, and marital status.

Conclusion: Smoking is a potential modifiable risk factor associated with initiating breastfeeding.

Public Health Implications: WIC counseling practices have a unique opportunity to identify smoking as a modifiable risk factor and offer cessation strategies which may improve infant health. Targeting high-risk groups to direct education and support for breastfeeding may be an effective intervention.

ABSTRACTS

#51 - Session A1

REDUCING UNINTENDED PREGNANCIES: USING PRAMS DATA TO EXAMINE MISSED PUBLIC HEALTH OPPORTUNITIES TO PROVIDE CONTRACEPTIVE EDUCATION

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Background: The Supplemental Nutrition Program for Women, Infants, and Children (WIC) represents 36 percent of all live births in Illinois and is 95% integrated with a Family Case Management (FCM) program that is staffed with public health professionals. These programs serve a disproportionate share of the women who are at increased risk of unintended pregnancy. In an effort to examine the possibility that health care providers are missing opportunities to provide information about contraceptive methods to prevent an unintended pregnancy, the Illinois Department of Human Services (IDHS) analyzed data on contraceptive counseling and pregnancy intentions among women who had a recent live birth.

Methods: Using data from the 2000 Illinois Pregnancy Risk Assessment Monitoring System (PRAMS), we estimated SUDAAN will be used to estimate the prevalence of unintended pregnancy (a composite of unwanted and mistimed) to identify women most likely to have an unintended pregnancy. We analyzed responses to questions about receiving contraceptive counseling from health care providers during the prenatal or postpartum period. SUDAAN was used to analyze the data to account for sample design and to weight the estimates to represent the state population. The PRAMS response rate was 80 percent.

Results: A total of The 1999 Illinois PRAMS survey had an 80% response rate (N=2,022), 1,989 women of whomanswered the question item on the intention of their recent live birth. Using weighted PRAMS data, the prevalence of unintended pregnancy was the prevalence of unintended pregnancy was 42.9%. The majority (59.1%) of women on WIC reported their last pregnancy was unintended. and 66.6% in contrast to the proxies of The prevalence of unintended pregnancy was inversely proportional to age (84.4%, < 20 years of age), education(60.6%, <12 years education), household income (66.2%,< $15,000)and highest among blacks (76.8%) and unmarried women (73.3%). The socio-demographic profile of unintended pregnancy is also associated with women who give birth to a LBW babyUnintended pregnancy was inversely proportional to age, education, household income and highest among African-American and unmarried women.68.0% were 20 or older. Using logistic regression modeling, unintended pregnancies were 78% (95% C.I. 0.53-1.14) more likely to have a VLBW infant (<1500 grams) than an intended pregnancy when controlling for maternal age, race, and marital status. Among unintended pregnancies, 11.5% answered “no” when asked “after your new baby was born, did a doctor, nurse or health care worker talked with you about using birth control?” and 12.9% are not currently using any method of contraception to prevent a subsequent pregnancy. One-third of WIC participants with an unintended pregnancy reported they didn’t receive postpartum contraceptive counseling.

Conclusion: Health care providers are missing opportunities to provide contraceptive education to prevent a subsequent unintended pregnancy.

Public Health Implications: Health care providers in general and FCM programs may have opportunities to reduce the rate of unintended pregnancy through patient education on effective contraception targeted to high-risk groups.

ABSTRACTS

#53 - Session B1

ACCESS TO HEALTH CARE AMONG HISPANIC/LATINO CHILDREN: UNITED STATES, 1998-2001

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Background. Few studies have provided national estimates of access to health care by subgroups of Hispanic/Latino children under18 years of age in the United States.

Methods. Data from the 1998-2001 National Health Interview Survey (NHIS) were analyzed using SUDAAN and are presented for five Hispanic/Latino subgroups: Mexican, Puerto Rican, Cuban, Central or South American, and Other Hispanic.

Results. Based on parent reports, each year an estimated 3.0 million (25.7%) Hispanic/Latino children lacked health insurance coverage at the time of interview, 1.6 million (14.1%) had no usual place to go for medical care during the past year, and 1.3 million (13.3%) experienced unmet health care needs during the past year due to cost. Of the five Hispanic/Latino subgroups, children in the Mexican subgroup (30.4%) were most likely to lack a health insurance plan, followed by the Central or South American subgroup (23.8%) and the Other Hispanic subgroup (18.6%). The percent of children not having a usual place to go for medical care was highest in the Mexican subgroup (16.7%), and lowest in the Cuban subgroup (6.5%). In addition, almost 14.4% of Mexicans and 12.4% of Puerto Ricans experienced unmet care needs due to cost compared with 10.7% of Other Hispanics, and 6.1% of Cubans. To explain the disparities, socio-economic factors such as poverty status and parent education were also examined.

Conclusion. Our study indicated that access to health care varied among Hispanic/Latino subgroups. Of the five Hispanic/Latino origin subgroups, children in the Mexican subgroup were most likely to experience lack of access to health care.

Public Health Implications. Hispanic/Latino children vary widely in their access to health care. Information provided by this study may be useful in facilitating programs that focus upon improving access to health care among Hispanic/Latino children.

ABSTRACTS

#54 - Session E1

CHANGES IN LEVEL OF PRENATAL CARE BETWEEN PREGNANCIES IN RELATION TO PRETERM BIRTH.

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Background. Preterm birth (PTB) is an important cause of infant death, especially for African-American infants. Cross-sectional studies have documented an association between PTB and adequacy of prenatal care (PNC). However, few studies have evaluated this association longitudinally.

Methods. We used the maternally linked Michigan livebirth data documented between 1989 and 2000 to examine changes in PNC, according to the Kotelchuck Index, between two pregnancies in relation to changes in PTB risk (i.e., <37 weeks). We excluded women whose PNC was categorized as "adequate plus" or "unknown." We stratified the data by pairs of first-second births, second-third births, etc., and examined changes in PNC between two pregnancies in relation to changes in PTB risk.

Results. We identified 422,590 Michigan women who delivered 565,816 singleton live births with birth orders second or higher between 1989 and 2000. Of these births, 7.6% were premature. Change of PNC from "adequate" or "intermediate" during the previous pregnancy to "inadequate" during the subsequent pregnancy resulted in significant increases in PTB risk. Conversely, change of PNC from "inadequate" to "adequate" or "intermediate" resulted in significant decreases in PTB risk. For example, among the first-second birth pairs, change of PNC from "adequate" to "inadequate" resulted in a significant increase in PTB risk, from 2.9% to 8.1% [risk difference (RD)= 5.2%, 95% confidence interval (CI): 4.5%, 5.9%]; whereas change of PNC from "inadequate" to "adequate" resulted in a significant decrease in PTB risk, from 8.1% to 2.3% (RD= -5.9%, 95% CI: -6.5%, -5.2%). However, change of PNC from "adequate" to "intermediate" or vise versa did not result in significant changes in PTB risk. This pattern persisted across parity and at levels of other sociodemographic risk factors.

Conclusions. Improved PNC between pregnancies was associated with a decreased risk of PTB, whereas worsened PNC was associated with an increased risk of PTB.

Public Health Implications. These findings support the importance of ensuring adequate PNC for women during all of their pregnancies.

ABSTRACTS

#56 - Session A2

PRIMARY LANGUAGE AS A PREDICTOR OF BIRTH OUTCOMES AMONG HISPANIC TEENS

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Background: Language has been used as a proxy measure for acculturation and not speaking English is viewed as a barrier to health services. It is therefore important to examine the potential influence of language on birth outcomes. Massachusetts' birth certificate data includes a language question on the Birth Certificate, which allows for individual level analysis and further investigation on the influence of language. This study will examine the effect of language on pregnancy outcomes and birth characteristics among Hispanic Teens in Massachusetts.

Methods: All singleton live births to Massachusetts residents age 15-19 indicating a Hispanic ethnicity on the Massachusetts Standard Certificate of Live Birth in 1999-2001 were selected for analysis (N=5005). The Birth Certificate question that reads, "In what language does the mother prefer to read or discuss health-related materials?" was used to create the language variable. Chi Square tests were performed to compare the probability of Low Birthweight Births, Preterm Births, breastfeeding, smoking, parity, adequacy of prenatal care, and age of mother among language groups (English/Spanish). This will be followed by multivariate analysis adding maternal nativity, with logistic regression used to analyze the independent effects of language and nativity, while controlling for other demographic variables.

Results: Results from preliminary analyses show that there is little difference in the proportion of Low Birthweight and Preterm births between English speaking Hispanic teens compared to Spanish speaking Hispanic teens. However, when examined using nativity/language subgroups, continental US-born, Spanish Speakers had the highest proportion of low birthweight births, and the differences among the four nativity/language subgroups was statistically significant (p=. 02). Further analysis will attempt to disentangle the effects of each of these variables.

Conclusions: Language appears to have a potential influence on birth outcomes among Hispanic Teens in Massachusetts.

Public Health Implications: In order to promote healthy outcomes through program planning and policy development it is important to understand the influence of mother's primary language.

ABSTRACTS

#57 - Poster Session

SECULAR TRENDS IN C-SECTION RATES AMONG MACROSOMIC DELIVERIES IN THE UNITED STATES, 1989-2000

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Background: The rate of cesarean delivery for all infants has been rising since 1996. Because of the increased risk of adverse birth outcomes, macrosomic infants are more likely to be delivered via cesarean section than normal birth weight infants. In this study, we examine national trends in cesarean delivery rates among macrosomic infants during 1989-2000. We further evaluate the maternal characteristics and risk factors for macrosomic infants delivered by cesarean section as compared to macrosomic infants delivered vaginally.

Methods: We analyzed U.S. 1989-2000 Linked Live Birth-Infant Death Cohort files, selecting term (37-44 week) single live births to U.S. resident mothers. We further selected birth weights greater than 4000 grams.

Results: Over the 11-year period, 26.2% of infants weighing 4000-4499 were delivered by cesarean section, as compared to 35.6% and 48.5% of infants weighing 4500-4999 and 5000+, respectively. The proportion of cesarean deliveries among infants weighing 4000-4499 and 4500-4999 remained relatively constant over the time period while the proportion of cesarean deliveries among 5000+ gram infants increased from 42.2% in 1989 to 52.9% in 2000. Maternal risk factors for cesarean delivery included previous cesarean delivery, diabetes, and hypertension. Hispanic and black mothers were also more likely to have a cesarean section. Obstetric complications such as prolonged labor, dysfunctional labor, fetal distress, breech presentation and cephalopelvic disproportion significantly increased the likelihood of cesarean delivery.

Conclusions: These findings indicate that rates of cesarean delivery have increased substantially among the highest birth weight category. The rate of cesarean delivery among black and Hispanic mothers is significantly higher than white mothers. Certain maternal characteristics and obstetric complications represent significant risk factors for cesarean delivery.

Public Health Implications: Despite recent controversy regarding the use of prophylactic cesarean delivery for suspected fetal macrosomia, the rate of cesarean delivery among macrosomic infants has increase since 1989. Thus, an examination of the risk factors associated with cesarean delivery among this population of macrosomic infants may help inform policies for the effective management of fetal macrosomia.

ABSTRACTS

#59 - Session A2

THE IMPACT OF MATERNAL MOBILITY STATUS ON BIRTH OUTCOMES AMONG SINGLETON U.S. DELIVERIES TO U.S. RESIDENT HISPANIC/ MEXICAN MOTHERS, 1995-1998

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Background: Much attention has been given to the "healthy migrant" theory which hypothesizes that healthier people are more able and likely to migrate, concurrently having better birth outcomes. It is less clear if this theory applies to mobility within a country. This study examines the impact of maternal mobility history (MMH) on birth outcomes among infants delivered in the U.S. to women of Hispanic/Mexican origin, with the null hypothesis that the birth outcomes will not vary by MMH.

Methods: The analysis was conducted using the Linked Live Birth/Infant Death cohort files 1995-1998, selecting single live infants born to Hispanic/Mexican mothers (n=1937256). MMH is categorized into four groups: a) foreign-born—maternal place of birth outside the U.S.; b) intra-regional—maternal place of birth one U.S. region, state of residence at delivery another U.S. region; c) inter-regional—maternal place of birth one U.S. region, state of residence at delivery different state in same U.S. region; and d) non-mobile—maternal place of birth, state of residence at delivery same. Maternal and infant characteristics, birth weight outcomes, and infant mortality rates were compared for MMH groups. Logistic regression was used to calculate odds ratios for MMH groups after controlling for maternal characteristics.

Results: Preliminary data suggest that some outcomes of these infants vary significantly by MMH but not necessarily in a pattern consistent with the "healthy migrant" theory. For example, infant mortality risk of the intra-regional group was higher (1.35) compared to the non-mobile group (1.22). Other birth outcomes were not significantly different between U.S. born mothers.

Conclusions: Our examination of birth outcomes of U.S.-born Hispanic/Mexican infants with different MMH provide mixed support for the presupposition that inter-U.S. mobility is associated with better birth outcomes.

Public Health Implications: Increasing our understanding of the association of MMH and birth outcomes may facilitate a better understanding of regional and racial disparities in birth outcomes.

ABSTRACTS

#60 - Session B5

CORRELATION BETWEEN MATERNAL CONDITIONS AND CHILD MALTREATMENT

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Objective:
By identifying conditions at the time of birth that are highly correlated with subsequent maltreatment of infants, interventions can be designed to mediate them so the likelihood of maltreatment is diminished.

Methods:
The study sample included all children born between 1996 and 2000 in Florida. The outcomes investigated are infant maltreatment reported up to age one for those children. Generalized linear models with log link function were fitted using the GENMOD Procedure of SAS. Risk factors considered in this study include mother's age, pregnancy interval, education, Medicaid participation, WIC participation, adequacy of prenatal care, LBW, marital status, race, previous pregnancy experience, Florida's Healthy Start prenatal screen scores, infant sex, plurality, drinking and smoking.

Results:
Infant maltreatment rates for the 1996-2000 birth cohorts were 3.15%, 3.30%, 3.69%, 4.32% and 4.32%, respectively. Twelve of the fifteen risk factors were found to be statistically significant for infant maltreatment. The results were consistent across the four birth cohorts. For example, maltreatment risk for infants to women who had less than high school education were greater than three times that of college education. We use the top four risk factors to construct risk assessment tool. For 1996 birth cohort (188,815), it shows that low risk pregnancy (90, 051) account for only 10.0% of maltreated infants, while the high risk and extremely high risk pregnancies (22,153) account for 41.3% of maltreated infants.

Conclusions:
The risk factors identified in this study could be useful for prevention of infant maltreatment.

Public Health Implications:
Seven of the nine maternal conditions that are significantly correlated with increased risk of child maltreatment can be prevented or reduced substantially, if we have the political will and vision to tackle the job.

ABSTRACTS

#61 - Poster Session

MULTIVITAMIN USAGE AMONG WOMEN GIVEN FREE VITAMINS THROUGH A REGION-WIDE DISTRIBUTION PROGRAM IN WESTERN NORTH CAROLINA

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Background: Preconceptional folic acid consumption has been shown to reduce the incidence of neural tube birth defects by up to 70%. Conducted in a region with high rates of neural tube defects, this study was done to assess whether women of childbearing would alter their vitamin-taking habits if given free vitamins with folic acid.

Methods: Using funds from a March of Dimes Grant, over 30,000 bottles of multivitamins have been distributed to non-pregnant, low-income women of childbearing age through a variety of healthcare settings in 17 western North Carolina counties. Begun in May 2001, vitamin distribution is expected to continue through December 2003 and is occurring in conjunction with an extensive folic acid media/education campaign. Staff at each site participates in a brief training program to ensure consistency in the distribution process. All vitamin recipients are counseled one-on-one about the importance of folic acid, given a brochure, and asked to complete a Tracking Card to be used later in the evaluation process. A brief telephone survey in Microsoft Excel was developed for administration to a random sampling of vitamin recipients. Included were questions about frequency of vitamin usage, as well as a question regarding knowledge of the benefits of folic acid. Mars Hill College students employed by the Center for Assessment and Research Alliances conducted the survey from January - March 2003.

Results: Surveyors attempted 3,451 calls and completed 500 telephone interviews. The most significant findings were that nearly 64% (320/500) of those surveyed reported taking the vitamin daily and an additional 7.8% (39/500) took the vitamin 5-6 times per week. By comparison, results of a 2001 March of Dimes Gallup Survey showed that only 29% of childbearing age women in the general population take a multivitamin daily.

Conclusions: Providing multi-vitamins as part of routine healthcare for women of childbearing age appears to be an effective method for increasing vitamin usage in that population. One-on-one education and a public folic acid education campaign may enhance effectiveness.

Public Health Implications: Free vitamin distribution to childbearing age women is a cost-effective method for reducing rates of NTD's and other folic-acid-preventable birth defects.

ABSTRACTS

#62 - Poster Session

PUERTO RICO MATERNAL INFANT HEALTH SURVEY, 2002

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Background: The scientific literature shows that some behaviors as well as some experiences before and during pregnancy are associated with adverse pregnancy outcomes. The Puerto Rico Maternal Infant Health Survey (ESMIPR, Spanish acronym) is a customized PRAMS survey designed to gather information about the health of mothers and newborns while monitoring risk factors affecting pregnancy outcomes.

Methods: A convenience sample of 31 hospitals (15 or more deliveries/week) was selected. The survey was conducted during March and April 2002 using a self-administered questionnaire that collected socio-demographic data, obstetrical history, prenatal care utilization, behaviors and experiences before and during pregnancy, and newborn data. A total of 2,310 women complied with inclusion criteria. A descriptive analysis for selected variables is presented.

Results: The average age was 25 years old (± 6.04 S.D.). The majority were 25-34 years old (39.4%). Over half, 55.6%, were unintended pregnancy. The prevalence of late or no entry into prenatal care was 13.2%. The prevalence of behavioral risk factors such as smoking, drinking alcohol, using drugs and physical abuse during pregnancy was 4.1%, 4.4%, 0.4%, and 2.0%, respectively. Adverse outcomes in newborns were low birthweight (12.0%), prematurity (17.3%), and congenital anomalies (2.1%). The prevalence of early postpartum breast-feeding initiation was 54.3%, and 91.2% reported they will breastfeed after hospital discharge. Back to sleep position was reported by 78.2%.

Conclusion: The ESMIPR shows two relevant findings: (1) The possibility of under-reporting of prevalence of smoking during pregnancy in birth certificates. The Department of Health Vital Statistics reported 1.0% during 2000. (2) Puerto Rico exhibits a higher percent of unintended pregnancy compared with PRAMS results nationwide (1999), 33.7%- 52.0%.

Public Health Implications: This type of survey gathers information that is not available from other sources. This information can be used for the decision-making process, the development of public policy directed at decreasing the identified risk factors, planning, and program evaluation. ESMIPR can measure trends to monitoring Healthy People 2010 objectives.

ABSTRACTS

#63 - Poster Session

PREGNANCY-RELATED DEATHS IN PUERTO RICO, 1999-2001

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Background: In Puerto Rico the pregnancy-related mortality ratio for 2000 was 20.2/ 100,000 live births. The aim of the present investigation was to examine the effect of socio-demographic factors on the incidence of selected pregnancy-related deaths using a retrospective cohort study design.

Methods: All death certificates (1999-2001) of women residing in P.R., 15-54 years old who died of pregnancy-associated causes were reviewed. A pregnancy-associated death was defined as the death of a woman while pregnant or within one year of termination of a pregnancy, irrespective of cause. Among pregnancy-associated deaths, pregnancy-related was defined as death caused or aggravated by the pregnancy or its management, associated-but-not-pregnancy-related from accidental or incidental causes and undetermined when the relationship of the death to pregnancy cannot be determined. MCH professionals classified those deaths. Multinomial Logistic Regression Model was used to identify the relationship between socio-demographic factors and pregnancy-related deaths.

Results: Of the 75 women identified, 49.3% deaths were pregnancy-related, 5.3% not pregnancy-related and 45.3% undetermined. In the pregnancy-related group causes of death were hypertensive disorder (32.0%), hemorrhage (19%), conditions associated to early pregnancy (11.0%), sudden death (11.0%) and others (27%). The most frequent cause of death among the undetermined group was infectious diseases (52%). The pregnancy-related mortality ratio was 21.1/100,000 live births. Maternal age, marital status, and education were not significantly associated with pregnancy-related death ($p>0.05$). However, marginally significant association was observed between 12 years or more of education and sudden death (IOR: 15.0; IC: 0.7-339.5).

Conclusions: The high number of undetermined pregnancy-related deaths found in this study underscores the importance of additional sources of information to improve case identification. Additional years should be analyzed to estimate the association between risk factors and maternal death, adjusting by potential confounding variables.

Public Health Implications: Continuous surveillance and additional studies should be conducted to assess pregnancy-related deaths to generate information that policy makers can use to develop effective strategies to prevent these deaths.

ABSTRACTS

#64 - Poster Session

PUERTO RICO INFANT MORTALITY EPIDIOLOGIC SURVEILLANCE SYSTEM (SIVEMI) 1996-2000

Evelyn Torres-Rodriguez, MSc, Rosa I. Perez-Torres, MD, MPH, MSc, Roberto Vorela-Flores, MD, MPH, Maternal and Child Health Division, Puerto Rico Department of Health

Background: The infant mortality rate for Puerto Rico was 9.9/1000 live births in 2000. The Healthy People 2010 objective for the Island is 6.2. SIVEMI (Spanish acronym) was designed for gathering data regarding infant mortality in PR. It also allows us to monitor the progress toward the achievement if Health People 2010 objectives. SIVEMI presents information of risk factors related to infant mortality.

Methods: SIVEMI utilizes linked death and birth certificates for death cohort analyses for 1996 to 2000. Those live births from mothers living outside of PR were excluded. Descriptive and differential analyses (95% CI) were preformed. Low birth weight, very low birth weight, teenage mothers, unwed mothers, and early prenatal care were tabulated for infant deaths and live births. Also, Perinatal Periods of Risk analyses were preformed.

Results: The mortality rates per 1000 live births were 7.7 for neonatal, 2.8 for post-neonatal and 10.4 for infant during the period. Among all infant deaths, low birth weight was present in 72% and 52% had very low birth weight. Around 25% were born to adolescent mothers and 55.5% to unwed mothers. Three quarters (75%) of mothers started prenatal care early. No statistical significance differences were found in the prevalence of the risk factors over the quinquennial. The maternal health and prematurity component of the PPOAR analysis shows the highest excess of fetal-infant mortality rate (1.4).

Conclusions: LBW is the risk factor most frequently found in infant mortality in PR. VLBW accounts for over 50% of LBW. There were no significant changes in early prenatal care, adolescent and unwed mothers, LBW and VLBW during the period.

Public Health Implications: The SIVEMI provides a simple and reliable system to monitor the effectiveness of the programs implemented to decrease infant mortality rate in PR. Evaluation of the programs designed for decreasing infant mortality is underway. It is also useful for monitoring some of the Title V performance and outcome measures.

ABSTRACTS

#66 - Session D1

PERCEIVED HIV RISK AND CONDOM USE IN THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS), 2000

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Background: This study will evaluate the association between perceived risk of acquiring Human Immunodeficiency Virus (HIV) and use of condoms among reproductive aged women. We are interested in determining if females who perceive being at risk for HIV infection are more likely to use condoms than those who do not perceive themselves to be at risk.

Methods: We used data from the 2000 BRFSS phone survey. The analysis was limited to approximately 10,000 sexually active women aged 18-44 from 12 states/territories who answered questions in the optional Family Planning module. Respondents were asked if they used birth control and the type used. They were also asked their perception of their risk for getting infected with HIV. Prevalence measures and cross-tabulations were completed to look at condom use by perceived risk of HIV infection.

Results: Most sexually active women reported using some form of birth control (74%); however, only 14 percent of women using birth control reported using condoms. Six percent of all respondents reported they had a high or medium risk for HIV infection. Of those who perceived a high or medium risk for HIV infection, only 14 percent reported using condoms. Those who perceived no or low risk reported the same level of condom use: 14 percent. These findings will be compared and contrasted with soon to be released 2002 BRFSS data. The 2002 data will also provide HIV risk and birth control methods for men aged 18-59. Risk profiles for condom use for men and women will be described using logistic regression.

Conclusions: Condom use did not vary by perceived risk of HIV infection for reproductive-aged females across 12 states/territories for 2000. By understanding why women who perceive themselves to be at risk for HIV do not use condoms, interventions to increase condom use can be developed.

Public Health Implications: Public health programs should focus on determining reasons for not using condoms and increasing use of condoms by those who are at high risk for HIV infection.

ABSTRACTS

#67 - Poster Session

PERISTATS: A RESOURCE TO SUPPORT MATERNAL AND CHILD HEALTH PROFESSIONALS

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March of Dimes Perinatal Data Center

Background: PeriStats is a database-driven web resource for the U.S. publicly available via the March of Dimes web site providing national, state and county maternal and infant health data in an interactive, user-friendly format.

Methods: PeriStats was designed by the March of Dimes Perinatal Data Center. PeriStats uses data compiled from many health agencies, including the Centers for Disease Control and Prevention (National Center for Health Statistics, National Center for Chronic Disease Prevention and Health Promotion and the National Center for HIV, STD, and TB Prevention), the Centers for Medicare and Medicaid Services, the Health Resources and Services Administration and others.

Results: PeriStats users can instantly display graphs, tables, and maps, with geographic comparisons for their choice of health indicators by race, ethnicity and maternal age. Some health indicators include measures of prenatal care adequacy, low birthweight, preterm birth, infant mortality, health insurance coverage and sexually transmitted diseases. Data are available for multiple years and are organized into four broad categories: births, infant deaths, population and risk indicators. PeriStats provides relevant Healthy People 2010 objectives that can be used as benchmarks for community goals and policy statements. National and State county maps can be generated that incorporate these goals so users can communicate priority geographic areas within a particular state.

Conclusions: This presentation will allow attendees to experience PeriStats by highlighting key features relevant to health professionals working in MCH epidemiology.

Public Health Implications: PeriStats can be used by professionals working to improve the health of women and infants by providing instant access to perinatal data to inform needs assessments, policy development, program planning and professional health education materials.

ABSTRACTS

#68 - Session C3

ANNUAL HOSPITAL CHARGES FOR PREMATURITY IN THE U.S.

Rebecca Russell, MSPH, Joann Petrini, PhD, Michael Davidoff, MPH, Karla Damus, PhD, Lisa Potetz, Karalee Poschman, MPH, Nancy Green, MD

Background
Between 1981 and 2001, the U.S. preterm birth rate (<37 completed weeks of gestation) increased 27% (9.4% to 11.9%)—the highest ever reported. Premature infants face a higher risk of health problems and death than other newborns and often require care in neonatal intensive care units. The purpose of this study was to determine the magnitude of hospital charges related to prematurity.

Methods: Analyses were conducted using the Nationwide Inpatient Sample (NIS) for 2000, which includes 7.5 million inpatient stays from a sample of 994 U.S. acute care hospitals. Hospital charges for "prematurity" were based on infant (<one year) stays with a diagnosis of prematurity/low birthweight (LBW). Cases were identified using the Clinical Classification Software code for "Short gestation, LBW and fetal growth retardation."

Results: In 2000, 388,000 infant stays had any diagnosis of prematurity/LBW. Charges for these stays totaled $11.6 billion and averaged $31,000. The average length of stay was 12.4 days. Stays missing charges (n= 9,750) were assigned the average charge ($31,000). Combined with the stays with known charges, the total national bill for hospital stays with any diagnosis of prematurity/LBW was estimated at $11.9 billion. Hospital stays for infants with any diagnosis of prematurity comprised about half of total charges for all infants in 2000 ($25 billion). These results, including findings for infants with a principal diagnosis of prematurity/LBW, the breakdown of prematurity/LBW into individual ICD-9 codes, and charges for uncomplicated newborns, early/threatened labor and normal pregnancy/delivery will be presented.

Conclusions: Hospital charges for infant stays due to prematurity/LBW comprise a substantial proportion of charges for all infant hospital stays and further highlight the need to identify prevention strategies.

Public Health Implications: The economic impact of premature infants and the rising rates in U.S. make prematurity a priority for maternal and child health researchers and a major focus area to improve the health of infants.

ABSTRACTS

#69 - Session D6

RESULTS OF NEURAL TUBE DEFECTS CASE ASCERTAINMENT PROCESS COMBINING VITAL RECORDS DATASETS AND BIRTH DEFECTS SURVEILLANCE DATA, FOR YEARS 1996 THROUGH 2001, IN PUERTO RICO.

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Background: The Birth Defects Surveillance System in its effort to ascertain all cases with Neural Tube defects (NTD) in Puerto Rico, has developed an active case ascertainment process in which 5 field abstractors visit 100% of the hospitals where births occur in a predetermine frequency. In addition, there has been a collaborative effort with vital records to identify potential cases. Cases with the case definition were identify from the Vital Records datasets (live births, fetal deaths and deaths certificates data), for years 1996 to 2001.

Methods: Data were decoded from an ASCII file from the Vital Records Office using a layout and syntax designed in SPSS and linked with the surveillance data. 208 cases with NTD's were considered from the vital records datasets and 404 from the surveillance data, for the years considered. A match with the surveillance data was done using delivery date, child's and parents names and social security number variables.

Results: Between 1996 and 2001, 93%(404) of NTD cases were ascertain through hospital based surveillance. 27%(110/404) were match with vital records. Out of 98 potential cases found in the vital records datasets with a possible NTD diagnosis, 15%(32) were a NTD case, 5%(10) did not fulfill the NTD case definition and were not a case, and, 27%(56) have not been reported by the field abstractors and are pending for inclusion into the surveillance's database or not considered as a case.

Conclusions: Case detection through the surveillance's program proved to be effective, ascertaining 93% of all NTD cases for years 1996 to 2001. Also, the vital records datasets demostrated to be an adequate source of information to ascertain NTD's.

Public Health Implications: Vital records are essential to ascertain NTD cases in order to provide service referral to MCH and CSHCN programs. A legislative mandate is needed to ascertain all cases at birth with NTD's.

ABSTRACTS

#71 - Session E2

A SUPERIOR LINKAGE STRATEGY: IMPROVEMENTS IN FLORIDA RECORD MATCHING FOR OUTCOMES RESEARCH

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Background: Maternal and Child Health outcomes research often requires linking multiple datasets, yet little is published pertaining to methodological issues. The quality of record linkage may affect research results, and simple record linkage can be an error-prone process. Care must be taken to avoid false matches while efficiently linking datasets.

Methods: Using SAS 8, Birth certificate data (N=196,000) was linked to Medicaid eligibility (N=1,620,200) data using a "Standard" method and a "University of Florida (UF) Merge." The Standard method used a common strategy of matching on mother's social security number. The UF Merge decomposed the birth certificate dataset into two components: (1) singletons or first of multiples infants; (2) siblings of the first component. Medicaid data was merged to the first component and subsequently to the second component. Correct matches were automatically and hand verified by sampling from both linked datasets at the 90% confidence level.

Results: 85,701 records were common to both linkage methods. The UF Merge increased the total number of matches by nearly 7,500 records over the Standard Merge. Additionally, the Standard Merge method contained approximately 4,300 erroneous matches. The net gain in correct matches was 11,800 records, which is an improvement of approximately 14% over matches utilizing the Standard Merge methodology.

Conclusions: The UF Merge method increases the number of accurately merged records. The primary advantage of the UF Merge strategy is the increase in quality control. The UF Merge targets questionable matches for automated or hand checking, whereas the standard merge cannot make that distinction. Most false positives and duplicates are eliminated. Other advantages of the UF Merge are its flexibility to suit different datasets, low cost, and its avoidance of "black box" commercial solutions.

Public Health Implications: The UF Merge strategy to link datasets is accurate, efficient, and robust. MCH outcomes research employing this method will yield more precise findings.

ABSTRACTS

#72 - Session C1

ASSOCIATION OF HISPANIC ETHNICITY, DEPRESSIVE SYMPTOMS AND YEARS LIVING IN THE UNITED STATES WITH REPORT OF NEVER HAVING HAD A PAP TEST AMONG MOTHERS

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Background: Hispanic women have twice the rates of cervical cancer and are less likely to have timely Pap test screening. We examined the association of never having a Pap test with ethnicity, depressive symptoms, years living in the US, language dominance, and having a usual source of care.

Methods: We examined data on 5,862 mothers age 18-49 years included in the 1998 National Health Interview Survey, a nationally representative sample. Our outcome was defined by maternal report of never having had a pap test. Maternal depressive symptoms were measured by a six-item distress battery known to be correlated with DSM-IV defined depression. Years living in the US were divided into less than 5 years, 5-10 years or greater than 10 years. We defined language as Spanish vs. English interview. Multivariate regression analyses controlled for maternal age, education, a live birth within the last year, single parent status, poverty threshold, insurance status and region.

Results: 12.9 % of mothers reported depressive symptoms. Hispanic mothers were at higher risk of never having had a Pap test (OR 6.3*) as compared to White-Non-Hispanics in the unadjusted analyses. However when accounting for the years lived in the US, ethnicity was no longer significant. Fewer years lived in the US was associated with a higher risk of never having a Pap test (<5 years OR: 15.5*; 5-10 OR: 8.4*; and 10+ OR: 3.5), compared to mothers born in the US. Mothers without a usual source of care were at higher risk of never having a Pap test (OR 2.9*), as were mothers with depressive symptoms (OR 1.5*). In contrast, Spanish language was associated with a lower risk of never having had a Pap test (OR 0.5*).

Conclusions: Hispanic, depressed and recently immigrated mothers are more likely to report never having had a pap test as compared to white, non-depressed women born in the US.

Public Health Implications: Ensuring access to a usual source of care soon after immigration to the US, as well as coordination of preventative care among depressed mothers, may be important steps in improved use of pap tests by some mothers.

ABSTRACTS

#73 - Session D6

FOLIC ACID AND PREGNANCY – DATA FROM THE PREGNANCY RISK ASSESSMENT MONITORING SYSTEM (PRAMS) PROJECT, 1996-2000

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Background: The current Phase IV PRAMS questionnaire has two questions on folic acid and one question on multivitamins. Many women know that folic acid may help to prevent neural tube defects but few women know that folic acid needs to be taken before they get pregnant. Most women believe that taking prenatal vitamins is all the protection they need to prevent their baby from being born with a birth defect. Folic acid awareness needs to be included in every magazine, TV show, cereal box, and wherever girls and women shop. We can help make the public aware of the critical need for women to take folic acid before pregnancy to prevent the tragic birth defects that more than 4,000 babies are born with every year in this country.

Methods: The three questions used to measure responses about usage, knowledge of and source are the following: "In the month before you got pregnant with your new baby, how many times a week did you take a multivitamin (a pill that contains many different vitamins and minerals)?"; "Have you ever heard or read that taking the vitamin folic acid can help prevent some birth defects?"; "Have you ever heard about folic acid from any of the following sources?".

Results: The Florida PRAMS data indicates an increased awareness that folic acid can help prevent some birth defects but too few women are taking it before pregnancy. In 1996 60.06 % of women had read or heard about folic acid and in 2000 76.20 % of women had read or heard that folic acid can help prevent birth defects of the brain and spinal cord. In Florida, 2000 PRAMS data shows only 24.42 % of women took a multivitamin every day in the month before they got pregnant and 2000 data indicates that 60.64 % of women did not take a multivitamin before pregnancy.

Conclusions: Although there is an increased awareness that taking folic acid before pregnancy and during
the first month of pregnancy too few women are actually following this path to better health for themselves and their babies. Additional efforts need to be made to better prepare women and girls for pregnancy.

Public Health Implications: Decreasing the number of babies born with birth defects will not only reduce the agony that parents face but will certainly reduce the financial burden placed on the parents of the child and the state of Florida.

ABSTRACTS

#74 - Poster Session

THE INFLUENCE OF SELECTED RISK FACTORS ON GESTATIONAL DIABETES MELLITUS ACROSS ETHNIC/RACIAL SUBGROUPS IN UTAH

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Background: The risks for gestational diabetes mellitus (GDM) have been validated through numerous studies. Little is known, however, about the relative strengths of the risk factors and the manner in which they vary across ethnic and racial subgroups. This study, therefore, examines the variations in prevalence and strength of risk factors of GDM in three ethnic/racial subgroups of Utah women.

Methods: Three years of Utah birth records (1999-2001) were pooled to yield a population of approximately 135,000 births. Women with multiple births (e.g., twins) and/or pre-existing diabetes were excluded from the analyses. GDM was a two-category variable (yes=1). Three racial/ethnic subgroups were used: non-Hispanic/Latino white, Hispanic/Latino, and non-Hispanic/Latino Native American. Risk factors, included simultaneously as continuous variables, were maternal age, number of previous live births, number of previous stillbirths, maternal education, and pre-pregnancy body mass index (BMI). Because access to care may be a confounding factor, a two-category residential location (urban/rural) was also included. Multivariate logistic regression was used.

Results: Hispanic/Latino and Native American females were 47% more likely to develop GDM than their non-Hispanic/Latino white counterparts (2.8% vs. 1.9%). Multivariate analysis revealed that only one risk factor, maternal age, retained statistical significance in all three ethnic/racial subgroups. The relative strengths and statistical significance of some other factors varied across subgroups. Among non-Hispanic/Latino white females, pre-pregnancy BMI (OR=1.1, $p<.001$) and education levels (OR=1.2, $p<.01$) were statistically significant. Among Hispanic/Latino females, maternal education was the only other statistically significant factor (OR=1.1, $p<.001$). Among Native American women, pre-pregnancy BMI (OR =1.1, $p<.001$) and number of prior stillbirths (OR=2.8, $p<.01$) retained statistical significance.

Conclusions: Maternal age was the most consistent predictor of GDM; however, some notable variations in the relative strengths and statistical significance of some other risk factors across subgroups were evident across subgroups.

Public Health Implications: GDM can have serious long-term consequences for diagnosed mothers and their offspring. Interventions must, however, consider the varying effects of known risk factors across racial and ethnic subgroups.

ABSTRACTS

#76 - Session A1

UNWANTED AND MISTIMED PREGNANCIES AND THEIR ASSOCIATION WITH SHORTER BREASTFEEDING DURATION: AN ASSESSMENT OF BOLIVIA AND PARAGUAY

Carrie K. Shapiro-Mendoza, MPH, PhD, Beatrice J. Selwyn, ScD, David P. Smith, PhD, Maureen Sanderson, PhD

Background: With high rates of unintended pregnancy in Latin America, it is important to study its consequences on child health and well-being. This study assesses the association between maternally-reported pregnancy intentions at conception, differentiating unwanted and mistimed pregnancies, and subsequent breastfeeding duration.

Methods: Data were ascertained from mothers of lastborn, surviving, singleton children who participated in the nationally representative 1998 Bolivia and 1990 Paraguay Demographic and Health Surveys. To explore the relationship between pregnancy intention and breastfeeding duration adjusting for potential covariates, the analysis applied the Cox proportional hazards model.

Results: Breastfeeding initiation was nearly universal in both Paraguay (95%) and Bolivia (99%). Children in Paraguay had a lower probability of continued breastfeeding at each month up to 36 months relative to children from Bolivia. Bolivia's median duration of breastfeeding was 19 months, five months longer than Paraguay's. The prevalence of unintended pregnancy in Paraguay was much lower than in Bolivia, 26% compared to 53%. In Bolivia, children of primiparae who were unwanted at conception were two times more likely to stop breastfeeding before children from mistimed or intended pregnancies and before children of multiparous mothers (adjusted hazard ratio, 2.59, 95% confidence interval, 1.54, 4.35). For Paraguay, no statistically significant association was found between breastfeeding duration and pregnancy intention regardless of maternal parity.

Conclusions: Findings for the effects of pregnancy intention on breastfeeding duration differ by country, and perhaps, is related to overall differences in breastfeeding practices and societal differences in perception of pregnancy wantedness. Because an association between pregnancy intention was found for Bolivia primiparae, but not for other subgroups or for Paraguay, care must be taken to assess country specific effects before implementing wide scale breastfeeding intervention programs that target population sub-groups.

Public Health Implications: Better access to effective family planning to control fertility may improve breastfeeding duration among primiparae in Bolivia, but this is unlikely in Paraguay regardless of parity. Programs that improve breastfeeding durations are needed for both Paraguay and Bolivia since both fail to meet World Health Organization recommendations of continued breastfeeding for two years and longer.

ABSTRACTS

#77 - Session E2

ALLY LINKED STATE-LEVEL BIRTH AND FETAL DEATH CERTIFICATE DATA COMPARED WITH MATERNALLY LINKED HOSPITAL DISCHARGE DATA

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Background: Maternal birth and fetal death certificate files linked longitudinally offer many analytic opportunities not possible with cross-sectional data, but these linkages are difficult to validate. As part of the Pregnancy to Early Life Longitudinal (PELL) Linkage Project, we have linked mothers to their subsequent deliveries in both vital statistics and hospital discharge data. These separate linkages afford an opportunity to validate the vital statistics maternal linkage and to use the combined data to best identify maternal links.

Methods: Using a database of vital statistics delivery event records (N=243,786) from Massachusetts in 1998-2000, we constructed a unique identifier for each mother by combining the mother's first name, maiden name, and date of birth to create a maternally linked vital statistics database. For hospital discharge data, the maternal link was based on both universal health identification number (encrypted SSN) and the combination of hospital number and medical record number. Percent agreement in the number of subsequent maternally linked deliveries per mother and the characteristics of any differences between the two independent databases were assessed.

Results: A total of 38,943 infants were identified as being born to a mother who delivered more than once in the three year period. As expected, the vital statistics link detected more subsequent deliveries than the hospital discharge link overall (37,205 vs. 35,596). Of these subsequent delivery records, 86.8% identified on the vital statistics and the hospital discharge data were identical. Surprisingly however, the hospital discharge linkage identified 4.7% additional records, not identified by the vitals data. The demographic pregnancy and hospitalization characteristics of the non-comparable links will be presented.

Conclusions: Maternally linked vitals data could be underestimating the true number of subsequent deliveries and linked hospital discharge data can improve the maternal linkages using vitals data by identifying how the vitals linkage fell short.

Public Health Implications: Maternal linkages using vitals data may be underestimating the true number of subsequent deliveries to mothers. The utilization of both maternally linked hospital discharge data and vital statistics data has important analytic applications not possible when using vitals statistics data alone.

ABSTRACTS

#79 - Poster Session

CONFIRMING SUICIDE DEATHS THROUGH RECORD LINKAGE OF THE HOSPITAL DISCHARGE AND DEATH CERTIFICATE FILE

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Background: Suicide is the third leading cause of death among adolescents and young adults. The accuracy of deaths attributable to suicide and the validity of official suicide rates have been questioned through many studies, which suggest suicides may be underreported due to misclassification. This study will focus on examining whether suicide attempts resulting in a death on the discharge file are recorded as suicide deaths in the death certificate file.

Methods: Records from the New Jersey Hospital Discharge and Death Certificate files 1994 through 2001 were extracted for adolescents and young adults ages 10-24. All attempted suicides (ICD9 Ecodes 950-959) from the discharge file were matched by name, date of birth, and sex to death certificates (via Auto Match software) to create a data set of suicide attempt histories. A comparison between the discharge record and death certificate record was done to determine whether the classification of suicide was consistent between the two files.

Results: Completed suicide attempts in the discharge file and death certificate cases that resulted in suicide had a 67% agreement. Where concordance was not found, 33% of attempts were discharged as expired and had a death certificate indicating a cause other than suicide. Additionally, 20% of the discrepant cases presented a cause other than suicide on the death certificate file while the physical death certificate indicated suicide as the cause of death.

Conclusion: Through record linkage, the Hospital Discharge File has the ability to both confirm and identify potentially misclassified cases of suicide in the Death Certificate File. Discordant cases, identified through this linkage, may contribute to underrporting and an incomplete picture of suicide in adolescents and young adults.

Public Health Implications: Comprehensive and reliable sources of data are needed in order to appropriately identify and target intervention efforts. Independent confirmations of vital statistics records add to the confidence a state can have when reporting specific suicide related health indicators.

ABSTRACTS

#80 - Session B4

MATERNAL MORTALITY IN CALIFORNIA, 1990-2001: ACTIVE SURVEILLANCE OF EMERGING POPULATIONS

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Background: In 2001, there were 168,929 births to immigrant Hispanic women representing 32% of all California births and 65% of Hispanic births. Although immigrant Hispanic women typically have better infant birth outcomes than their U.S. born counterparts, little is known about maternal health differences between these populations. This study presents maternal mortality and cause of maternal death data for 1990-2001.

Methods: Maternal birth and death records from California's Office of Vital Statistics were analyzed for all women of reproductive age within California. Maternal mortality rates were defined as number of maternal deaths (ICD-9 codes *630-676* and ICD-10 codes *261-273*) per 100,000 live births. Risk ratios were calculated and linear tests for trend performed.

Results: Overall Hispanic maternal mortality rates were similar to statewide rates from 1990 through 2001. However, when Hispanic ethnicity was stratified by immigration status, the maternal mortality rate among immigrant Hispanic women was higher than their U.S. born counterparts for ten of the twelve years analyzed. In most years the immigrant Hispanic maternal mortality rate was at least 1.5 times greater than for U.S. born Hispanic women and reached as high as 4.3 times greater in 1996. Although the gap narrowed from 1997-1999, it began increasing again in 2000 and neared 2.5 times by 2001. No linear trends were found for the statewide and overall Hispanic rates or for the immigrant and non-immigrant Hispanic rates. Since 1990, the leading cause of maternal mortality among immigrant Hispanic women has been Eclampsia/Preeclampsia, unlike for U.S. born Hispanics.

Conclusions: Efforts to reduce preventable health disparities, including pregnancy-related deaths within the emerging Hispanic populations are needed. Analyzing Hispanic maternal mortality by immigration status is a useful surveillance tool for focusing on at-risk populations.

Public Health Implications: Distinct differences in maternal mortality exist among California's diverse population of childbearing women. Active surveillance will be necessary, particularly when maternal mortality in California is 10.6 deaths per 100,000 live births, while the Healthy People 2010 objective is 3.3.

ABSTRACTS

#81 - Session D4

INCREASING INFANT MORTALITY AMONG VERY LOW BIRTHWEIGHT INFANTS — DELAWARE, 1994–2000

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Background: Healthy People 2010 aims to reduce the national infant mortality rate (IMR) to 4.5 per 1,000 live births. After a decade of declining IMR, Delaware noted an increase beginning in 1996. Delaware now ranks seventh highest nationally for infant mortality.

Methods: We analyzed data from Delaware's linked birth-death certificate database during 1989–2000 using 3-year moving averages. We performed stratified analyses to examine IMR trends within infant birthweight and plurality subgroups and according to maternal characteristics. We examined use of assisted reproductive technology (ART) by using the population-based U.S. Registry of ART Procedures.

Results: Delaware's IMR decreased from 11.6 (per 1,000 live births) during 1989–1991 to 7.1 during 1994–1996; IMR then increased to 8.7 during 1998–2000. Examination of birthweight-specific mortality revealed the increase was limited to infants born with very low birthweight (VLBW: <1,500g). From 1994–1996 to 1998–2000, the IMR increased from 235 (per 1,000 live births) to 294 in this group (p=0.03). The increase was greatest for VLBW twins and triplets and less for VLBW singletons. Additional stratification on maternal factors revealed the increases were highest among infants whose mothers were aged e"30 years, married, privately insured, resided in suburban New Castle County, and who had at least a high school education and initiated prenatal care in the first trimester. The number of ART procedures performed in Delaware increased 13% during 1996–2000. In 2000, an estimated 1% of all births, and 7.5% of VLBW births, were attributable to ART.

Conclusions: Delaware's increase in infant mortality appears to be primarily related to increasing mortality among VLBW infants. The risk factors associated with this increase suggest that deaths of infants born to women from higher socioeconomic groups are the primary contributors to Delaware's increase in infant mortality. Use of ART has increased, and may be contributing to increased infant mortality.

Public Health Implications: Infertility treatments may be contributing to increased risk of infant death. Further investigation is needed to determine the underlying factors related to increased risk and the interventions required to prevent infant deaths.

ABSTRACTS

#82 - Poster Session

RISK FACTORS FOR SMOKING CESSATION RELAPSE AFTER PREGNANCY

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Background: Smoking among women is of particular concern due to the strong association between prenatal smoking and adverse birth outcomes. Maternal smoking is also associated with adverse events during infancy, including increased rates of sudden infant death syndrome (SIDS). The goal of this study is to look for factors that predict smoking relapse among women who successfully stop smoking during pregnancy.

Methods: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS) surveys a stratified random sample of women after a live birth. In 1998-1999, 1867 women were interviewed up to 6 months after delivery (64.0% response rate). Women were asked about smoking status prior to pregnancy, during, and after pregnancy. Among women who quit smoking during pregnancy, we compared women who remained smoke-free after delivery with women who relapsed after delivery.

Results: Overall, 24.2% of women smoked before pregnancy. Of these, 50.6% (228) successfully quit smoking during pregnancy. Of those who successfully quit smoking during pregnancy, 39.9% (91) relapsed following delivery. Relapse was more likely among women who lived with other smokers, were multiparous (e.g., not first born), were unmarried, and those who completed less than 12 years of education.

Conclusions: Half of smoking women successfully quit smoking during pregnancy but relapsed after delivery. Women most likely to relapse were those who lived with smokers, were multiparous, were unmarried, and had low education.

Public Health Impactions: Smoking cessation programs should be aware of these risk factors and tailor programs accordingly.

ABSTRACTS

#83 - Session B5

INTIMATE PARTNER PHYSICAL DOMESTIC VIOLENCE (IPP-DV) AMONG CHILDBEARING AND PREGNANT WOMEN CALIFORNIA, 1998-2001

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Background: While IPP-DV undoubtedly impacts women's health, violence against pregnant women may also have adverse health effects on their offspring. This study was conducted to identify demographic factors and/or patterns associated with domestic violence and pregnant women during 1998-2001.

Methods: We analyzed data from the 1998-2001 combined California Women's Health Surveys, which are annual random computer-assisted telephone interview surveys, coordinated by the California Department of Health Services. A total of 16,199 California women responded to the surveys. Analyses were limited to women of childbearing age (18-44). Respondents were asked whether they were exposed to IPP-DV in the past 12 months.

Results: In the subset of 8,577 women of childbearing age, 8.2% were exposed to IPP-DV in the past 12 months; 444 (5.2%) were pregnant at the time of the survey. The overall rate of IPP-DV in the past 12 months for pregnant women was lower than that of the non-pregnant women (6.5% vs. 8.3%, respectively) (differences are not statistically significant). Among the pregnant women, 21.7% those who were exposed to IPP-DV did not have health insurance, compared to 7.7% uninsured rate among those who were not exposed to IPP-DV ($p<0.05$). In addition, 75.9% of the pregnant women who were exposed to IPP-DV were not married, compared to 23.4% of the pregnant women who were not exposed to IPP-DV ($p<0.001$). Other variables tested such as: race/ethnicity, work status and immigrations status did not differ significantly between the IPP-DV exposed vs. non-IPP-DV exposed pregnant women.

Conclusions: Pregnant women are at risk for IPP-DV, in rates ~~close~~ similar to non-pregnant women. Furthermore, IPP-DV exposed pregnant women are ~~at disadvantage with regards~~less likely to have health insurance coverage~~, and~~ or marital support.

Public Health Implications: Coordinated health care and community efforts are needed to implement routine screening and interventions to effectively address domestic violence among pregnant women.

ABSTRACTS

#86 - Session D1

COGNITIVE, AFFECTIVE, AND CONTEXTUAL DIMENSIONS OF PREGNANCY INTENTIONS AMONG PRENATAL AND ABORTION CLINIC PATIENTS IN NEW ORLEANS, LA.

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Background: Data from the Determinants of Unintended Pregnancy Risk Study were used to examine pregnancy decision-making among in prenatal care and women seeking abortion.

Methods: Traditional demographic measures of pregnancy intentions were compared to newer measures developed using qualitative research, among 1017 women (full sample) seeking abortion. A restricted sample (n=142) with residence in New Orleans was compared to 336 women entering prenatal care.

Results: In the full sample by traditional measures, 51% of women reported the pregnancy was mistimed; 46% wanted no more children. Among the new dimensions, common emotions on becoming pregnant included being scared, confused, surprised, and unhappy. As reported by the women, the most common partner emotions were being surprised (39%), confused (33%), shocked (33%), and scared (27%). Reasons for seeking abortion included unable to afford a child (49%), not ready for a child (42%), not wanting any more children (31%), not married (30%), too young (21%), and relationship unstable (20%). Comparing the restricted abortion sample to women in prenatal care, abortion patients were more likely to report unhappiness, confusion, and being scared. Only 3% of abortion patients and one third of prenatal patients reported the pregnancy was intended. Only 18% of abortion patients but 69% of prenatal patients reported their partner wanted a baby. Seven percent of women in the abortion clinic wanted a baby with their current partner compared to 51% in the prenatal clinic.

Conclusions: Relationship with male partners, emotional reactions, and life circumstances were critical dimensions in decision-making. Traditional measures of pregnancy intentions did not clearly distinguish women choosing to continue or abort the pregnancy.

Public Health Implications: Better understanding of pregnancy intentions can contribute to programs to prevent unintended pregnancies.

ABSTRACTS

#87 - Session E2

LINKING INTERACTIVE AND RESEARCH DATABASES: APPROACHES, RESULTS, LESSONS

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Background: Data linkage is increasingly important as we work toward coordinated service delivery, health profile development, and better surveillance. To link several databases or eliminate duplicate records from one requires accuracy and efficiency. As we merge service/ encounter databases, the issue is "deduplication" of records or events. As the availability of linked data increases, the concern is about the subsequent use being different from the original intent of the data capture.

Methods: The Oregon Department of Human Services (DHS) has undertaken a variety of data linking projects with the goal of better understanding clients served and population assessed. The DHS Office of Family Health has used both deterministic and probabilistic approaches. These approaches will be described briefly and two DHS projects will be presented as examples: deterministic matching of birth certificate and Medicaid enrollment data; probabilistic matching of newborn blood-spot screening, hearing screening, and birth certificate data for population surveillance and follow-up on possible newborn hearing loss.

Results: About 20% of women whose birth was paid by Medicaid appeared unaware of this payment source when providing birth certificate data. The linked newborn data showed about 8% of the newborn population would need some follow-up to assure timely screening occurred. Both approaches yield a high proportion of linkages without clerical review (97% or better). The probabilistic approach used the same matching criteria for each pass through the data.

Conclusions: While the process selected depends on the purpose of the linkage, common factors are a phased approach and the use of weights to reflect the likely validity of a match. The purpose of linkage- research or program- was amore important factor in determining the data linking process than preference for probabilistic or deterministic technique.

Public Health Implications: Linkage makes public health program data more useful to both clients and providers, improving the likelihood of timely, appropriate service. Linked data helps validate our assumptions and the measure we use to guide program decision. Data linkage adds value as long as we understand the quality of our linkage and parameter for appropriate data use.

ABSTRACTS

#88 - Poster Session

PRENATAL CARE USE AFTER WELFARE REFORM: AN UPDATE ON NEW JERSEY'S IMMIGRANT MOTHERS

Ingrid M. Morton, MS, New Jersey Department of Health and Senior Services, Janet Huang, MPH, Lakota Kruse, M.D., M.P.H., New Jersey Department of Health and Senior Services

Background: Adherence to rules regarding the provision of non-emergent public health care moved into high gear in August of 1997. Welfare reform excluded coverage to undocumented pregnant mothers and provided only care for imminent delivery. Although previous New Jersey research indicates little change as a result of the reform, recently available information implies full implementation of welfare reform was not achieved until 1998. Using foreign-born uninsured immigrant mothers as the closest available proxy for undocumented New Jersey mothers, we will focus on prenatal care source, patterns of use and whether specific subgroups of uninsured immigrant mothers were adversely affected by welfare reform.

Methods: The New Jersey Electronic Birth Certificate, Birth Certificate, Hospital Discharge for mother and infant, Death Certificate and Medicaid eligibility files from 1996 to 2001 were linked. Prenatal information, insurance status and maternal demographics were examined to determine whether changes occurred.

Results: Uninsured mothers increased from 421 in 1998 to 1648 in 2001. Foreign-born uninsured mothers increased from 246 in 1998 to 1517 in 2001. Foreign-born uninsured mothers who were Hispanic and born in Central or South America contributed the most to the increase. Late initiation of prenatal care increased (32%) among foreign-born mothers from 5.0% in 1996 to 6.6% 2001. A decline in the percentage of Medicaid mothers particularly among Central and South American mothers was observed between 1998 and 1999.

Conclusion: This information provides insight into the effects of welfare reform in New Jersey and illustrates the value of developing surveillance systems that monitor healthcare utilization, insurance status, and pregnancy outcomes for foreign-born mothers. Focusing on ways to capture this population into a healthcare safety net would improve utilization patterns and outcomes.

Public Health Implications: Understanding whether uninsured immigrant mothers have been affected by changes in welfare reform and whether these changes have contributed to gaps in services, is useful in monitoring the negative impact of welfare reform on prenatal care utilization.

ABSTRACTS

#89 - Session A5

PRESCRIPTION OF STIMULANT MEDICATION FOR ATTENTION-DEFICIT HYPERACTIVITY DISORDER (ADHD) IN UTAH CHILDREN

Shaheen Hossain, PhD, Terry Allen, PhD, Scott Williams, MD, George Delavan, MD, Fan Tait, MD

Background
Even though stimulants have been shown to be the most effective medication for managing Attention-Deficit Hyperactivity Disorder symptoms, controversy exists over the increase in the number of prescriptions to treat such behavior disorders. The purpose of this study was to describe the prevalence of stimulant medication for treatment of ADHD among Utah children ages 0-18.

Methods
The Utah Department of Health analyzed the Division of Occupational and Professional Licensing prescription data set for calendar year 2002 for children ages 0-18. The data set contained a total of 138,456 prescriptions. Prescriptions for methylphenidate, amphetamine, and dextro-amphetamine were included in this study. A series of algorithms were used to obtain person-level prescription data. Annual, monthly, age and gender-specific prevalence rates were examined.

Results
The overall stimulant medication prescription prevalence rate was 2.96%. However the rate differed considerably by age group. Males were prescribed medication more often than females. The male-to-female ratio was 2.8:1. The medication prescription rate varied substantially from month to month (.97% - 1.36%). The number of prescriptions declined significantly during May through July, which suggests that parents are less likely to use medication for their children when school is not in session.

Conclusion
This effort was undertaken to establish a baseline for stimulant medication for treatment of ADHD among Utah children. This population based prevalence study provided new insights on prevalence variation. This study also helped to clarify the concern of public and media about over prescription of stimulant medication and demonstrated that Utah's rate of prescription claims for ADHD medication is within the range of national average.

Public Health Implication
ADHD is a very common childhood disorder, which disrupts many lives. Many different types of treatments are available to manage ADHD symptoms. If the disorder is not treated appropriately and managed effectively, it can lead to serious public health problems. Parents, teachers, professionals, and media need more information about the appropriate assessments and treatment for ADHD.

ABSTRACTS

#92 - Session A4

MATERNAL MORBIDITY CLASSIFICATION SYSTEM

Pamela L. Johnson, Ph.D., M.D., University of Michigan

Background: The overall burden of maternal morbidity on society is especially difficult to measure because of the enormous variety of reported pregnancy-associated complications, equivocal nature of the definitions of these complications, and the multi-factorial relationship between risk factors and outcome. At present, no adequate classification system exists that fully describes the magnitude of the public health burden due to pregnancy. Previous descriptions of maternal morbidity focus on specific time periods (antepartum, delivery, postpartum) with extremely narrowly defined outcomes, often times excluding important conditions (e.g. traumatic, systemic, psychiatric, iatrogenic) affecting maternal health.

Methods: This study involved the development of a classification system for pregnancy-associated diagnoses and co-morbidities using administrative data (ICD-9-CM codes) from a five-year (1995-1999) linked hospital inpatient and birth certificate records data set in the state of Michigan. The principal diagnoses of each record were organized under three main categories: 1) maternal conditions 2) fetal conditions and 3) labor and delivery. The first two categories, 'maternal' and 'fetal' conditions, include ICD-9-CM codes for pre-existing co-morbidities and their attendant risks for the mother and fetus, respectively, upon admission to the hospital. The third category, 'labor and delivery', contains codes for diagnoses made during labor and delivery, immediately post-delivery, during postpartum re-admissions, and from all hospital procedures.

Results: Approximately 3050 ICD codes were organized under maternal conditions (78%), fetal conditions (9%), labor and delivery (10%), and other/non-classifiable (3%). The maternal conditions contained codes for maternal characteristics (1%), trauma and injury (21%), systemic conditions (6%), and specific organ system conditions (72%). Of the maternal conditions, 16.5% had an infectious etiology.

Conclusions: This classification system provides an algorithm to analyze administrative data to identify clinically significant pregnancy episodes and the morbidities within those episodes.

Public Health Implications: This comprehensive classification index for pregnancy-related co-morbidities is proposed as a tool for better identifying and comparing the true burden of disease on maternal morbidity and mortality.

ABSTRACTS

#93 - Session E6

A PROFILE OF VERY LOW RISK WOMEN WHO HAD A PRIMARY CESAREAN DELIVERY

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Background The national proportion of cesarean births reached 24.4% in 2001, the highest rate since 1988. At the same time, the rate of vaginal birth after cesarean (VBAC) decreased to its lowest rate in over a decade (16.7 %).

Methods Analysis is based on U.S. national birth certificate data from 1999—2001. We examined the primary cesarean rate (defined here as the number of primary cesareans per 100 live births to mothers who have not had a previous cesarean) for mothers with singleton, full term (37+ weeks) births involving a vertex presentation and no reported medical risk factors and complications of labor and /or delivery reported on the birth certificate. Our analysis stratified the primary cesarean rate for this group by age, parity of mother, race and Hispanic origin, State and region. We also examined the use of obstetric procedures (amniocentesis, electronic fetal monitoring, ultrasound, induction and stimulation of labor) in these births.

Results The overall rate of primary cesareans to mothers with no recorded medical risk factors or labor complications rose 25 percent between 1999 and 2001. The overall rate was almost 6 percent in 2001, although rates were higher for older primiparous women, and older black-non-Hispanic mothers. For example, among mothers age 35 and over, 11 percent of very-low risk black non-Hispanic mothers had a cesarean delivery, compared to 7 percent of white non-Hispanic mothers. The rate of induction was 23 percent among low risk primiparous women with no complications of labor/and or delivery. .

Conclusions There is a need to closely monitor trends in primary cesarean delivery, especially since a primary cesarean greatly increases the likelihood of a future cesarean delivery.

Public Health Implications The increasing rate of primary cesarean deliveries, combined with a decreasing VBAC rate, may mean that fewer women will have the option of a vaginal birth in future pregnancies, and that these trends will be reflected in an ever increasing overall cesarean rate.

ABSTRACTS

#95 - Session A4

RACIAL DISPARITIES IN MATERNAL MORBIDITY IN MICHIGAN

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Background: The pregnancy-related mortality ratio among African-American women was more than six times that of Caucasian women in Michigan from 1987 to 1996, representing the highest racial disparity in the nation. The objectives of this study are to identify factors which contribute to this large racial disparity through a description of risk factors for and differences in pregnancy-related morbidity in African-American and Caucasian women in Michigan.

Methods: Birth certificate records from the Michigan Resident Birth File (1995 to 1999) were linked to pregnancy-associated inpatient hospitalization records from the Michigan Inpatient Data Base from the same period for African-American and Caucasian female residents, age 9 to 55 years. Racial differences in hospitalizations were evaluated.

Results: During the period of 1995-1999, there were 759,240 pregnancy-associated hospitalizations and 668,773 live births in Michigan. The overall live birth to hospitalization ratio was 113.5 hospitalizations per 100 live births, which was higher for African-American women (124.5 hospitalizations per 100 live births) than for Caucasian women (105.5 hospitalizations per 100 live births). A greater proportion of the hospitalizations of African-American women than of Caucasian women were for antenatal conditions (10.1% of hospitalizations of African-American women and 6.2% of hospitalizations of Caucasian women) and postpartum conditions (2.7% of hospitalizations of African-American women and 0.9% of hospitalizations of Caucasian women). A greater proportion of African-American women than Caucasian women had a medical risk factor (17.8% versus 16.3%) while a smaller proportion of African-American women than Caucasian women had an obstetrical procedure (86.9% versus 89.3%) reported on the birth certificate.

Conclusions: African-American women are more likely than Caucasian women to be hospitalized for pregnancy-associated hospitalizations overall. African-American women are also more likely to be hospitalized for antenatal and postpartum conditions than Caucasian women in Michigan.

Public Health Implications: A racial disparity exists in both maternal mortality and maternal morbidity in Michigan. By understanding the burden of maternal morbidity and associated factors, public health practitioners may intervene to reduce maternal morbidity and mortality.

ABSTRACTS

#96 - Session E1

IMPACT OF PERINATAL SUPPORT ON SUBSEQUENT BIRTH

Ann Dozier, RN,Ph. D, University of Rochester

Pregnant women involved with perinatal support services (PSS) show few benefits over women not receiving these services. This is not surprising given the nature of clients receiving services and the complex interplay of factors affecting birth outcomes. Some argue that exposure to outreach accrues during the subsequent pregnancy. A secondary data analysis compared pregnancy factors and outcomes between the index birth (during which the woman received PSS) and the subsequent birth.

The database, from a Health Start project, linked birth registry information with PSS client unique identifiers. Only women with at least two live singleton births were included. Analyses compared the 1481 women with two births living in the Healthy Start Project Area (inner city) who received Medicaid, with the subset of women (n=328) receiving some PSS during the index birth and a smaller subset (n=46) receiving PSS that included home visiting. Variables compared were: conception more than 12 months after delivery, late entry into care, adequacy of care, normal BMI, intendedness, smoking or STD during pregnancy, normal birthweight, SGA preterm birth, NICU admission and breast feeding

Odds ratios were calculated comparing the pregnant women exposed to PSS with the Project Areas Medicaid group for each of the above variables. Prior receipt of PSS (exposure) more than doubled the likelihood that the subsequent pregnancy was more than 12 months after the index birth (OR=2.3, CI(95%): 1.73–3.0). All other comparisons were not significant.

The same comparisons were made between the pregnant women exposed to home visiting PSS and the Project Area Medicaid group. Only two variables showed a significant relationship. Among the PSS home visiting group, pregnancy was three times more likely to occur more than 12 months after index birth (OR=3.31, CI(95%): 2.21-4.94). By contrast these women were also 2.5 times more likely to have inadequate care for the birth.

The only consistent effect of PSS found in this analysis was that women who received PSS were more likely to delay the subsequent pregnancy. While this is to improving pregnancy outcomes, more research is required to better understand the potential short and long term benefits of perinatal support services.

ABSTRACTS

#97 - Session B1

DYNAMIC CHANGES IN MEDICAID COVERAGE OF PREGNANT WOMEN

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Background: Medicaid coverage related to pregnancy is an important tool designed to maintain the well being of pregnant women and their infants. However, little is known regarding the dynamics of coverage preceding and following delivery. Because Medicaid coverage type and duration are granted based on an application and review process, the benefit received by the mother may change during the critical period of fetal development. A comprehensive picture of Medicaid coverage during this period can help us better evaluate the effectiveness of the coverage and programs related to the pregnancy such as the Family Planning Waiver.

Method: Birth vital statistics (BVS) cohort of 1995 — 2001 were linked to Medicaid eligibility datasets to flag the mother's Medicaid coverage at any given date during a period of one year before and one year after the date of the child's birth. The coverage was classified as SOBRA and Non-SOBRA coverage (defined in the Sixth Omnibus Budget Reconciliation Act), and those with Family Planning (FP) flags after the FP Waiver took effect.

Results: In each birth cohort, the number of women with both Non-SOBRA and SOBRA Medicaid coverage increased during pregnancy, peaked at the day of delivery, and gradually decreased after delivery. However, the number of women covered by SOBRA and Non-SOBRA Medicaid changed differently. The number of women covered by Non-SOBRA Medicaid changed slowly during pregnancy, with a rapid increase close to the day of delivery. The number of women covered by SOBRA Medicaid increased rapidly around the time of pregnancy, peaked before the day of delivery and rapidly decreased afterwards.

Conclusions: There is different behavior between Medicaid subgroups. This difference may contribute to the nature of the Medicaid services provided, and may be markers for different demographic subgroups that would otherwise appear homogenous.

Public health implications: Outcomes research should consider whether a simple Medicaid flag is sufficient or whether to account for changing pattern of coverage time.

ABSTRACTS

#98 - Poster Session

NUTRITION/EXERCISE EDUCATION IN AN AFTER-SCHOOL PROGRAM: LINKING UNIVERSITY RESEARCHERS WITH COMMUNITY

Nancy P. Chin, PhD, MPH, Assistant Professor, University of Rochester Medical Center, Krista Catherwood, BA, Foodlink, Adrienne Morgan, MS URSMD, Diana Fernandez, MD, PhD, MPH, Assistant Professor, URMC

Background: Traditionally, academic medical centers have followed a three-part mission of research, education, and patient care. Recently the University of Rochester Medical Center (URMC) added a fourth mission: to improve the health of the community in which it is embedded. The fourth mission at URMC is promoted through Project Believe. Its goal is to make Rochester, NY the healthiest community by the year 2020 through a focus on preventing obesity and reducing ethnic and racial health disparities. The Healthy People 2010 objectives for the nation point to the increasing trend in childhood obesity in this country as a major health concern and to the role of nutrition and exercise in maintaining an optimal body mass index (BMI). Long-term success in obesity treatment is both low and costly, arguing for a prevention focus

Methods: This poster describes a Project Believe program that links URMC MCH researchers with already existing community programs and medical student volunteers to establish a nutrition/exercise education program in inner city after-school and summer lunch programs that will increase knowledge and change attitudes towards healthy eating and regular exercise among children 6-12 years of age. Pre and post tests of knowledge and attitudes as well pre and post BMIs are calculated. The program is further evaluated through ethnographic family interviews that assess parents' perceptions of the program's impact on household practices.

Results: At this writing data collection has just begun. Preliminary data suggests that approximately 35% of children are overweight, twice the national average. Both children and program staff enjoyed the curriculum and new knowledge has been introduced. Additional data will be collected June-November 2003.

Conclusions: Nutrition education and exercise can be successfully integrated into already existing after-school and summer lunch programs.

Public Health Implications: Health eating and exercise habits begin in childhood. Introducing education programs into already existing programs capitalizes on existing resources and can work to promote healthy food choices and regular exercise.

ABSTRACTS

#99 - Poster Session

MATERNAL HEALTH CONCERNS AFTER DELIVERY: INSIGHTS FROM THE PREGNANCY RISK ASSESSMENT MONITORING SYSTEM (PRAMS)

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Background: The Pregnancy Risk Assessment Monitoring System (PRAMS) is an on-going population-based surveillance system that collects self-reported information on maternal behaviors before, during and shortly after pregnancy. In addition to quantitative survey data, PRAMS also documents all comments made by mothers who participate in the project.

Objective: The focus of this research is to identify, in the PRAMS comment data, maternal health concerns during the early post-partum period.

Methods: We used free text comment data from 10 states, chosen based on data availability, participating in PRAMS in 2000 Preliminary analysis included review of data to identify major themes. Subsequent analysis will include systematic coding and linking to survey data.

Results: Major themes identified were: 1) perceived need for extended postpartum hospital stay, 2) lack of education about newborn care after discharge, 3) need for support and counseling for postpartum depression, 4) barriers to breastfeeding after returning to work, and 5) maternal insurance coverage beyond delivery.

Conclusion: Results can be used to 1) develop policy recommendations, and 2) design programs addressing continuity of postpartum care for women and infants.

ABSTRACTS

#100 - Poster Session

POSTPARTUM SMOKING CESSATION BARRIERS AND AIDS FOR ALASKAN WOMEN

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Background: Tobacco use is the most important single preventable cause of death and disease in our society. Addiction can be hard to overcome. Knowing what current smokers (who are motivated to quit) indicate as barriers or as aids to quitting smoking can help design successful smoking cessation programs.

Methods: We analyzed Pregnancy Risk Assessment Monitoring System (PRAMS) data from Alaska for the year 2000. PRAMS uses a population-based, stratified sampling design to survey 160 of the approximately 900 Alaska resident women each month who have recently delivered a live-born infant. Current cigarette smokers (women who are on average three to four months postpartum) are asked about their desire to quit smoking within the next six months. Those who indicate a desire to quit are asked about barriers and aids to quitting smoking.

Results: In Alaska, 24.4% of postpartum mothers indicated that they currently smoke cigarettes. These women were more likely to be teenagers, Alaska Native and have less than a high school education (even when adjusting for age). Alaska Native women were almost twice as likely as white women to smoke in their postpartum months (37.1% compared with 21.1%). When these women were asked of their desire to quit, 89.7% of white women had a desire to quit compared with 70.9% of Alaska Native women. There was no association between desire to quit and whether the woman was a current user of smokeless tobacco. The number one barrier to smoking cessation for either white (84%) or Native (87%) women is the craving for a cigarette. The number one aid was a nicotine patch, gum, nasal spray, or inhaler. Zyban or other non-nicotine prescription medicine was the number two aid for either racial group. However, while nearly the same percentage of white women mentioned this (79% for nicotine patch and 68% for Zyban), only half the percentage of Native women mentioned it (64% for nicotine patch and 32% for Zyban).

Conclusions: Barriers and aids to smoking cessation differ by demographics among postpartum Alaska women.

Public Health Implications: Smoking cessation programs should consider these data to better serve their clientele.

ABSTRACTS

#102 - Poster Session

IDENTIFYING POPULATION-BASED REPEAT PREGNANCIES FOR HEALTH OUTCOMES RESEARCH

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Background: Accurate assignment of repeat pregnancies to entire populations is important for analyzing trends and social patterns of reproduction across all demographic classifications. To do this, one needs to identify and link mothers and infants from sequential birth cohorts. A usual and often satisfactory method uses birth vital statistics (BVS) to track women by social security number (SSN), which does not account for erroneous SSNs. More importantly, it cannot track women with missing SSNs, a key segment of society that often experiences poorer health outcomes.

Method: A new strategy was developed to identify women over multiple years in a BVS database, using combination of SSN, name, spouse's name, birth date, address, and other personal identifiers. The data were linked to Medicaid eligibility datasets. The 1995 birth cohort was studied using the 1995-2001 BVS datasets to find repeat pregnancies.

Result: ~13% of women who delivered in 1995 had a subsequent delivery within 24 months, ~25% of those women had a subsequent delivery within 36 months (a ~92% increase over 24 months), ~35% within 48 month (a ~40% increase over 36 month), ~43% within 60 months (a ~23% increase over 48 months), and ~52% within 72 months (a ~22% increase over 60 months). This trend held true for mothers who delivered in 1996, 1997, 1998, and 1999 for the period where data were available. The poorest Medicaid women had the highest percentage of subsequent births followed by better-off Medicaid women, while those without Medicaid coverage had the lowest subsequent birth rate.

Conclusions: The new methodology tracked primiparous mothers in a target year and subsequent births in follow-up years with high reliability. The reproductive behavior and health trend in whole populations with different demographic backgrounds can be studied more reliably and accurately.

Public health implications: By including all births in our study, we removed the possible bias by excluding women without SSNs, an often vulnerable subpopulation in our society.

ABSTRACTS

#103 - Session A2

PEERS, BODY CONCEPT, AND SELF-CONCEPT IN BRITISH AND AMERICAN ADOLESCENTS: A QUALITATIVE STUDY

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Background: The present study explores in depth the relationships between peers, body concept, and self-concept during adolescence. Previous studies examining peer influence have mostly relied on self-report measures that do not allow for an understanding of adolescents' attitudes and experiences from their own perspective. This study is an extension to a previous study that examined the contributing developmental factors to adolescent weight concerns in Britain and North America.

Method: Semi-structured interviews were used to explore adolescents' perceptions and attitudes towards friendship, social acceptance, peer victimization, self-concept, and body concept.

Results: Close friendships promoted positive feelings towards the self. Peer popularity and acceptance had links with body concern, as attractiveness was an important requirement for popularity. Teasing contributed to negative attitudes towards the self, and appearance-related teasing was linked to body concern. Teasing experiences also varied with age, sex, and culture

Conclusions: Peer acceptance and victimization contribute self-concept and body concern during adolescence. The impact of peer experiences varies by age, sex, and culture.

Implications: To identify at risk adolescents for poor psychological health and disturbed eating behaviors. Aims: 1) Recognize peers contribution to the development of self-concept and body concept during adolescence. 2) Discuss the relationships between adolescent peer groups and both positive and negative health outcomes. 3) Identify the social factors that contribute to poor health outcomes during adolescence.

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ABSTRACTS

#104 - Poster Session

CANADIAN MATERNITY EXPERIENCES SURVEY PILOT STUDY

Susie Dzakpasu, MHSc[1]; Beverley Chalmers, DSc (Med): PhD[2] , Hajnal Molnar-Szakács, MD[1] for the Maternity Experiences Study Group of the Canadian Perinatal Surveillance System, Health Canada. [1]Health Surveillance and Epidemiology Division, Health Canada; [2]Centre for Research in Women's Health, Sunnybrook and Women's College Health Sciences Centre, University of Toronto.

Background: The Maternity Experiences Survey (MES) is a project of the Canadian Perinatal Surveillance System (CPSS). In 1999, the CPSS acknowledged that available data sources did not allow for effective national surveillance of important perinatal health indicators, such as postpartum depression and patient satisfaction with health services. Consequently, the Maternity Experiences Study Group was formed to guide the development and implementation of a survey that would fill these data gaps. The MES will be the first of its kind in Canada.

Methods: A pilot study for the MES was carried out with a non-representative sample of 302 mothers, chosen to include Aboriginal women, Francophone women and teenage mothers. The sample was drawn from Canadian birth registry data. Mothers whose children had died or were no longer in their care were excluded. Participants were interviewed 9 to 11 months postpartum about their behaviours, knowledge and experiences during pregnancy, birth and the postpartum months. Interviews were mainly face-to-face, with telephone interviews in some instances.

Results: The response rate was 86%. The average interview length was 90 minutes, 30 minutes longer than the target length. However, there were no problems with item non-response. Some events, such as complications during labour and birth, and use of street drugs, were reported by less than 5% of respondents. Questions on prenatal tests and procedures performed during birth had a higher rate of "don't know" responses (up to 23%) compared with other questions (less than 5%).

Conclusions: The high response rate demonstrates that a national maternity survey would be an effective method of addressing existing gaps in Canadian perinatal health information. The survey instrument will have to be shortened to the target length. The instrument and survey methodology will have to be reviewed to determine if the MES can collect reliable information on rarely reported events and issues with a high rate of "don't know" responses.

Public Health Implications: The MES will provide important maternal health information, allowing Health Canada to carry out more effective national perinatal health surveillance with a view to influencing perinatal health policy and practice.

ABSTRACTS

#105 - Session E6

DIFFERENTIAL TRENDS IN US CESAREAN SECTION RATES: A COMPARISON OF PRETERM AND NOT PRETERM BIRTHS BY RACE/ETHNICITY

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Background: Increasing US cesarean section rates have been attributed to many factors including the rise in multiple births and births to women 35 and older, and may contribute to the increasing preterm birth rate (<37 weeks gestation). Using natality data from National Center for Health Statistics, this study addresses trends and disparities in cesarean section rates by maternal race/ethnicity for preterm (<37 weeks) and not preterm (>=37 weeks) births.

Methods: A retrospective analysis of natality data from the National Center for Health Statistics was conducted to examine total, primary, and repeat c-section rates by maternal race/ethnicity, plurality, and maternal age in the United States for the years 1991, 1996, and 2000. Total, primary, and repeat c-section rates were calculated as a percentage of live births. Relative risks and 95% confidence intervals were calculated with Epi Info 2000 using a chi-square distribution.

Results: Between 1996 and 2000, total cesarean section rates among preterm deliveries increased 16.1% for NHB infants, compared to 10.6% for NHW infants, but among not preterm infants the change was almost equal for NHB and NHW infants (approximately 10.5%). In 2000, total cesarean section rates for preterm births were highest for NHW infants (36.4%), however, the rate for not preterm infants was highest for NHB infants (22.9%). Between 1996 and 2000, the RR (preterm/not preterm) of having a cesarean section for NHB infants increased from 1.29 (95% CI 1.27-1.30) to 1.35 (95% CI 1.34-1.37), whereas the RR for NHW infants (1.69, 95% CI 1.68-1.70) remained the same.

Conclusion: The total c-section rate for non-Hispanic black preterm infants is increasing faster than the rate among non-Hispanic black not preterm infants. Thus, while total c-section rates among preterm infants have been increasing most rapidly for non-Hispanic black infants, rates were still lower than preterm non-Hispanic white infants in 2000.

Public Health Implications: While further research is necessary to understand the etiology of preterm labor and preterm birth, it is useful to understand how clinical practice patterns differentially impact the preterm birth rate for racial/ethnic groups.

ABSTRACTS

#106 - Session C4

IMPROVING MCH SYSTEMS IN MARYLAND THROUGH STATE AND LOCAL COLLABORATION

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MedChi, The Maryland State Medical Society, Maternal and Child Health Programs

Background: Infant mortality has long been a measure for availability of, access to, and quality of, health care services, as well as community well-being. Maryland's infant mortality rate has consistently remained higher than the national average, with considerable disparity between African American and white populations. New approaches are needed to look beyond clinical and technological solutions to improve systems of care, and subsequently health outcomes.

Methods: Over the last five years, three separate activities–Fetal and Infant Mortality Review (FIMR), Child Fatality Review (CFR), and Maternal Mortality Review (MMR)–were established in all jurisdictions in Maryland. Each of these programs encompass all jurisdictions in Maryland and have a common goal, but operate very differently. FIMR includes any pregnancy outcome of interest, typically fetal deaths 20 weeks gestation and greater or infant deaths occurring up to one year of age. FIMR is not a mandated activity but has funding support through the Improved Pregnancy Outcomes contracts with local health departments. CFR includes all sudden and unexpected deaths from birth up to 17 years of age, typically Medical Examiner cases. CFR was established through legislation but does not have funding allocated. MMR includes any death of a woman during pregnancy up to 365 days following delivery. MMR is a legislated activity that currently has funding support. MedChi, The Maryland State Medical Society has been contracted to operate MMR and provide technical assistance to FIMR and CFR programs throughout the state.

Results: FIMR, CFR, and MMR examine sentinel events in Maryland to identify new ways to address MCH issues of interest, both locally and statewide.

Conclusions: These three approaches to examining maternal and child health outcomes have provided new opportunities for state and local collaboration between public and private stakeholders to improve systems of care for families in Maryland.

Public Health Implications: Given the increase_ competition for shrinking funds, it is critical to continually identify new opportunities for the use of available resources.

ABSTRACTS

#108 - Session B4

MATERNAL MORTALITY REVIEW IN MARYLAND

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Background: Maryland has a higher maternal mortality ratio than the U.S. average, and is far from meeting the Healthy People 2010 objective of 3.3 maternal deaths per 100,000 live births. The 2000 Maryland General Assembly enacted legislation to establish maternal mortality review as a collaborative effort between the Maryland State Department of Health and Mental Hygiene and MedChi, The Maryland State Medical Society.

Methods: Enhanced surveillance methods were used to identify pregnancy-associated deaths defined as the death of a woman during pregnancy or within 365 days of termination of pregnancy, irrespective of the cause. Cases were identified with the assistance of the Maryland Vital Statistics Administration through a review of death certificates, linkages of death certificates to live birth and fetal death certificates, and Medical Examiner cases. All pregnancy-associated deaths in 2000 and 2001 were abstracted by an Obstetrician-Gynecologist and then grouped by category of issue for discussion. Cases were then reviewed by MedChi's Maternal and Child Health Committee to determine whether they were pregnancy-related or not, and whether they might have been preventable.

Results: A total of 87 pregnancy-associated deaths were identified for 2000 and 2001 in Maryland, 35 in 2000, and 44 in 2001. An additional eight suicide cases identified during 1993 to 1999 were also included in the case reviews. Program accomplishments include: broadened focus of maternal mortality cases reviewed by examining pregnancy-associated deaths, hospital chart reviews of all deaths, chart reviews of medical examiner cases, categorization of cases by issue of interest to facilitate discussion, template for case summary, recommendations, and annual report on Maternal Mortality. Additionally, as a result of reviewing cases of maternal suicide, activities have been implemented to identify provider needs and deve_op resource materials for the appropriate management of maternal depression.

Conclusions: Maryland has made tremendous progress in formalizing its maternal mortality review activities to identify and review pregnancy-associated deaths, develop recommendations, and implement activities.

Public Health Implications: Maryland's approach to conducting maternal mortality review as a public-private partnership may be useful to other jurisdictions seeking to establish a new program or develop new ideas for an existing program.

ABSTRACTS

#109 - Poster Session

ADDRESSING PERINATAL HEALTH PRIORITIES IN BALTIMORE CITY

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Background: Baltimore City has significantly higher rates of infant mortality than those of Maryland state and U.S. national averages. In the last several years, Baltimore City FIMR has successfully integrated the PPOR approach in its on-going effort to identify populations at risk for poor pregnancy outcome, and develop strategies to improve infant survival.

Methods: Using FIMR and PPOR, live births weighing less than 1,500 grams at birth and fetal deaths were determined to contribute the most to fetal-infant mortality rates and to have the greatest racial disparity. Four priorities to improve pregnancy outcomes in Baltimore were identified and activities subsequently developed to address them.

Results: The four priorities to improve pregnancy outcomes in Baltimore are: 1)care following a poor pregnancy outcome, 2)perinatal infections, 3)family planning and preconception/inter-conception care, and 4)adequate utilization of prenatal care. Activities to address these priorities were further developed through subcommittees for legislative and policy, institutional and health systems, provider education, and community education and outreach. Program accomplishments include: producing report of findings, sharing findings and recommendations with stakeholders, developing and conducting provider education activities, developing institutional protocols, and developing and conducting community education events.

Conclusions: Baltimore City has successfully used its FIMR and PPOR findings to develop strategies for improving perinatal services available to women and families.

Public Health Implications: Baltimore=s success in identiying and addressing MCH priorities may be useful to other programs working to develop solutions in this era of scarce resources.

ABSTRACTS

#110 - Session E3

SYPHILIS DURING PREGNANCY IN BALTIMORE CITY

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Background: Baltimore City FIMR identified perinatal infections as an area for intervention following extensive reviews of fetal and infant deaths. Despite tremendous progress in reducing syphilis in Baltimore City, preventing syphilis, particularly during pregnancy, remains a public health priority.

Methods: Baltimore City FIMR collaborated with the Baltimore City Health Department to review syphilis cases occurring among pregnant women. Multi-disciplinary case reviews were conducted to identify broader systems issues beyond the disease intervention approach and develop recommendations.

Results: There were three presumptive congenital syphilis cases reported in 2001 and seven in 2002 among
Baltimore City residents. The seven cases from 2002 were reviewed by a multi-disciplinary committee and illustrated several opportunities to improve services. Subsequently, a number of recommendations were developed for appropriate identification and management of pregnant women with syphilis.

Conclusions: Baltimore City Health Department was able to successfully use its FIMR to examine presumptive congenital syphilis cases and develop recommendations to address identified issues.

Public Health Implications: In addition to reviewing fetal and infant deaths, the FIMR approach may be useful for developing solutions to other areas of MCH and public health practice.

ABSTRACTS

#111 - Poster Session

MATERNAL CHARACTERISTICS AND BEHAVIORS AMONG FOREIGN-BORN WOMEN IN FIVE PRAMS STATES C ARKANSAS, COLORADO, FLORIDA, NORTH CAROLINA, AND WASHINGTON STATE, 1997-2000.

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Background: In 1990, 15.0% percent of live births in the U.S. were to foreign-born women. By 2000, foreign-born women accounted for 20.8% of U.S. live births. Foreign-born women have better birth outcomes than U.S.-born women despite having more adverse socioeconomic risk factors. Maternal characteristics and health behaviors might contribute to these differences.

Methods: Pregnancy Risk Assessment Monitoring System (PRAMS) data for Arkansas, Colorado, Florida, North Carolina, and Washington State were analyzed for 1997-2000. We compared maternal characteristics, health-behaviors, and birth outcomes of foreign- and U.S.-born women. SUDAAN software was used to calculate weighted population estimates. Women who were born in U.S. territories (1.2%) and women who were missing information on mother=s place of birth (0.4%) were excluded from the analysis.

Results: Of the 50,361 women contacted by PRAMS, 74.1% completed their questionnaire. Of these, 17.9% (n=9,015) were foreign-born. They were less likely than U.S.-born women to have completed high school (Crude Odds Ratio [COR] 0.42; Confidence Interval [CI] 0.38B0.46), to be a teenager when they gave birth (COR 0.54; CI 0.48B0.61), and to be unmarried (COR 0.89;CI 0.80B0.98). They were more likely to live in a household with a > 1 person per room ratio (COR 2.83;CI 2.26B3.12), and to have had 3+ previous live births (COR 1.47; CI 1.26-1.70). After adjusting for these demographics, foreign-born women were less likely to smoke during pregnancy (Adjusted Odds Ratio [AOR] 0.12; CI 0.09B0.17), or to report experiencing ≥ 6 stressful events during the year before birth (AOR 0.52; CI 0.4B0.65). They were more likely to breastfeed their infant for at least one month (AOR 2.86; CI 2.53-3.23). With regard to birth outcomes, they were less likely to give birth to a preterm infant (AOR 0.81;CI 0.70B0.94), or to have a low birth weight infant (AOR 0.76;CI 0.70-0.83).

Conclusions: The better birth outcomes found among foreign-born mothers compared to their U.S.-born counterparts may reflect more positive maternal health behaviors and characteristics. These include not smoking during pregnancy and experiencing less stressful events in the year prior to giving birth.

Public Health Implications: Understanding the reasons for better birth outcomes among foreign-born mothers could provide insights into strategies to prevent risks among U.S.-born mothers.

ABSTRACTS

#112 - Poster Session

SEX-FOR-CRACK-COCAINE EXCHANGE, POOR BLACK WOMEN, AND PREGNANCY

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Background: Crack cocaine dramatically changed the lives of many poor black women in inner cities. The male dominated sex-for-crack cocaine barter system places marginalized women at risk for contracting HIV infection and other sexually transmitted diseases as condom use is inconsistent. The other consequence of high frequency, unprotected sex is pregnancy.

Methods: In a National Institute on Drug Abuse funded study (F31-DAO5870), epidemiological methods were used to screen 52 poor black female crack users, age 18-50, to identify those who exchanged sex for crack a minimum of once per week. Forty six women qualified and of that number, 23 women reported sex for crack conceived pregnancies. Ethnographic interviews were conducted with 19 women who became pregnant by exchanging sex for crack. Interview transcripts were analyzed using qualitative analytical procedures.

Results: Of 23 women reporting sex for crack conceived pregnancies, 41 pregnancies were reported only 7 were terminated by abortions. Eleven women became pregnant more than once. Most women carried pregnancies to term. Seventeen sex for crack conceived children were reported. Qualitative analyses demonstrated that three issues shaped responses to sex-for-crack pregnancies: 1) severity of crack use; 2) religious beliefs and 3) social organization patterns with in poor Black communities.

Conclusions: Pregnancies occurred in 50% of the women who exchanged sex for crack. The extreme addictive power of crack cocaine influenced the conceptions. Women in this context give birth to children with whom they may not be emotionally connected.

Public Health Implications: Pregnancy prevention programs targeting poor black female crack users should be incorporated in substance abuse treatment. A thorough probe into the background of child abuse victims is indicated especially when their mothers are suspected of using crack cocaine. These children may be conceived by sex for crack exchange and require additional effort in locating a suitable foster home.

ABSTRACTS

#115 - Poster Session

PLACENTA PREVIA: NEONATAL MORTALITY AMONG LIVE BIRTHS IN THE UNITED STATES.

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BACKGROUND: Placenta previa (PP) is an important complication of pregnancy, and has been associated with congenital malformations, fetal growth restriction, preterm births, anemia in the newborns and perinatal mortality. Most of the studies that have assessed perinatal mortality among previa pregnancies were published more than a decade ago, and to our knowledge, only two are recent. Also, there has been no study specifically addressing the effect of PP on neonatal survival among live births in the United States. Accordingly, we undertook this study to determine the level of neonatal mortality associated with placenta previa, and to explore the likely pathway for mortality among previa neonates.

METHODS: It is a population-based retrospective cohort study of singleton live births on the national linked live birth/infant death file for 1997. Women with the diagnosis of PP who underwent delivery by a cesarean section were retained in the analysis. Neonatal mortality among pregnancies complicated by PP was compared to that of non-previa gestations. Adjusted and unadjusted hazard ratios were generated from a Proportional Hazards Regression model.

RESULTS: Of 3,773,369 live births, 9,656 were complicated by PP (2.6 cases per 1000). Among PP cases, 114 neonatal deaths occurred (11.8 per 1000), versus 14951 (4 per 1000) among non-previa neonates ($p < 0.0001$). The adjusted relative risk of death was three times higher among previa neonates (HR= 3.06; 2.40-3.94). After adjusting for small-for-gestational age (SGA) alone, exclusive of preterm birth, low birth weight and congenital malformation, the hazard ratio for neonatal mortality due to PP remained unchanged from 3.06 (without SGA) to 3.04 (with SGA).

CONCLUSIONS: Placenta previa triples the risk of neonatal mortality, which is mediated mainly through preterm birth.

PUBLIC HEALTH IMPLICATIONS: Placenta previa is an important risk factor for neonatal death. Intensive neonatal follow-up is needed, especially, for cases of previa complicated by preterm delivery.

ABSTRACTS

#117 - Poster Session

FETAL DEATHS ≥20 WEEKS' GESTATION AMONG WASHINGTON STATE RESIDENTS, 1992-1999

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Introduction: Fetal deaths ≥20 weeks' gestation (stillbirths) are an important U.S. public health problem. Although nearly as many stillbirths occur as infant deaths each year, more information is needed to guide public health policy and interventions.

Methods: We analyzed 1992-1999 Washington State (WA) fetal death and live birth certificate data for women residents 15-49 years who delivered an infant ≥20 weeks' gestation or a stillbirth. We analyzed stillbirths by maternal demographic and fetal characteristics. We compared early (20-27 weeks' gestation (EFD)) and late (≥28 weeks' gestation (LFD)) fetal death rates by cause of death and maternal medical conditions.

Results: From 1992-1999, there were 3,428 stillbirths and 626,140 live births in WA. Fetal death rates increased from 5.4 to 5.8 per 1,000 live births plus stillbirths. Of all stillbirths, 1854 (54.1%) were LFDs, 3143 (91.7%) were singletons, 1,787 (52.5%) were males, and 1,233 (36.0%) were first deliveries. Overall, 16.5% of stillbirths were associated with at least one maternal medical condition or risk factor.

EFD rates increased from 2.1 to 2.8 per 1,000 live births plus EFD from 1992-1999. LFD rates decreased from 3.3 to 3.0 per 1,000 live births ≥28 weeks' gestation plus LFD. The most frequent causes of death for EFD and LFD were conditions originating in the perinatal period (2638, 77.0%) and congenital anomalies (768, 22.4%). Women who experienced EFD were more likely to report a medical condition or risk factor than women with a LFD (18.3% compared to 14.9%). Uterine bleeding (109, 6.9%), oligohydramnios (105, 6.7%), and incompetent cervix (97, 6.2%) were the most common conditions among women with an EFD. Diabetes (103, 5.6%), pregnancy induced hypertension (97, 5.2%), and polyhydramnios (74, 4.0%) were most common among LFDs. History of previous preterm or small-for-gestational age infant was more common among women with an EFD (61, 3.9%) than those with a LFD (41, 2.2%).

Conclusions: While overall fetal death rates and EFD rates are increasing in WA, LFD rates have declined slightly.

Public Health Implications: Understanding the relative contribution of EFD and LFD and associated risk factors is necessary to design interventions to prevent stillbirths in WA.

ABSTRACTS

#118 - Poster Session

ASSOCIATION BETWEEN EXCESSIVE PRE-PREGNANCY WEIGHT AND INADEQUATE WEIGHT GAIN WITH MATERNAL AND NEONATAL COMPLICATIONS

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Background: Overweight is an increasingly common health problems which is an important risk factor in obstetrics/gynecology. The aims of the present investigation were: (1) examine the effect of excessive pre-pregnancy weight on the incidence of maternal (during pregnancy and at delivery) and neonatal complications using a retrospective cohort study, and (2) evaluate the association between inadequate weight gain and maternal (at delivery) and neonatal complications using a cross-sectional study.

Methods: Medical records of 888 primigravid women that had delivered singleton births during 1999 at a tertiary hospital and whose pre-pregnancy weight was considered excessive (BMI>26.0 Kg/m^2) or normal (19.8 Kg/m^2 $\leq$ BMI26.0 Kg/m^2) were review. Women with pre-pregnancy diabetes mellitus, pre-pregnancy hypertension, and missing information on BMI were excluded. A Multinomial Logistic Regression Model was performed to estimate magnitude between risk factors and complications.

Results: Excessive pre-pregnancy weight was not significantly associated with the incidence of premature rupture of membranes (IOR=1.26; 95% CI: 0.6-2.6), hypertensive disorder (IOR= 2.6; 95% CI:0.8-8.8), urinary tract infection (IOR=0.2; 95% CI:0.03-1.7), preeclampsia (IOR=1.2; 95% CI:0.2-6.0), pre-term birth (IOR=1.2; 95% CI:0.4-3.6) and Apgar Score <7 at 5 minute (IOR=2.2; 95% CI:0.5-9.9). Marginally significant associations were observed for cesarean (IOR=1.9; 95% CI: 1.0-4.0), meconium (IOR=4.1; 95% CI: 0.9-17.7), and low birth weight (IOR=0.4; 95% CI: 0.2-1.1). Weight gain below the recommended levels was significantly associated with pre-term (POR=3.5; 95% CI: 1.2-9.8) and low birth weight (POR=2.6; 95% CI: 1.3-5.2). Weight gain above the recommended levels was significantly associated with cesarean (POR=2.2; 95% CI: 1.1-4.3), and marginally associated with preeclampsia (POR=3.1; 95% CI: 0.8-11.4) and meconium (POR=3.1; 95% CI: 0.8-11.4).

Conclusions: Excessive pre-pregnancy weight and inadequate weight gain were associated with maternal and neonatal complications.

Public Health implications: This study underscores the importance of preconceptional counseling and continuing monitoring during gestation in order to reduce the risk of pregnancy/labor complications associated with inadequate weight.

ABSTRACTS

#120 - Session E3

HIV COUNSELING AND TESTING PRACTICES AMONG UTAH PRENATAL CARE PROVIDERS

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Background: Undiagnosed HIV-positive females may unwittingly transfer the virus to their unborn children. Simple screening tests during pregnancy could lead to interventions that could prevent this devastating consequence. The Centers for Disease Control and Prevention, Public Health Service, and American College of Obstetricians and Gynecologists (ACOG) have recommended that universal HIV testing be offered to all pregnant women. The purpose of this study was to determine the percentage of Utah prenatal care providers offering HIV counseling and testing to all pregnant women. This study also examines the circumstances and barriers that influence HIV testing.

Methods: Between January and March 2003, the Utah Department of Health mailed- 461 questionnaires to all prenatal care providers, including obstetricians, family practice physicians and nurse-midwives. A total of 273 questionnaires were returned. Of these, 14 (5.2%) did not provide prenatal care and were excluded from the analyses. Descriptive analysis was used to describe the prevailing practices, awareness of the guidelines, and related barriers to implementation. Logistic regression was used to explore the relationships between offering HIV testing and provider characteristics.

Results: Overall, 70% of providers reported that they offered HIV testing to all of their pregnant patients. A significant proportion of providers (13%) either did not screen or offered it only to some patients. One fourth of the providers (26%) indicated that they were not familiar with ACOG recommendations. The most cited reason for not offering testing to all patients was low perceived risk among the population served (17.5%). Having a HIV policy in practice setting was the strongest predictive factors of offering testing (OR=3.32, $p<.05$).

Conclusions: The majority of providers offer HIV testing to all prenatal patients even though the prevalence rate of HIV/AIDS in Utah is among the lowest in the U.S. This study was timely and provided baseline measures of HIV screening practices.

Public Health Implications: Prenatal HIV testing is vital in eliminating mother to child transmission. Improving provider awareness in this area will increase universal screening of all pregnant women. A partnership between the health department and providers will enhance the implementation of policies that facilitate universal counseling and voluntary testing.

ABSTRACTS

#121 - Poster Session

ADVENTURES IN PUBLIC HEALTH: AN EVALUATION OF A PUBLIC HEALTH 101 COURSE

Sharon Talboys, MPH, Joyce Gaufin, BS, Richard Melton, Dr.PH, Shaheen Hossain, PhD, Dagan Wright, MSPH, Tara Johnson, BS
Utah Department of Health

Background: A large majority of public health professionals have educational backgrounds in areas other than public health. The realization that a competent workforce is necessary for the delivery of essential public health services has led to a number of national and other collaborative efforts to improve and enhance skills among public health professionals. The Utah Department of Health recognizes the importance of workforce development and believes that all staff need to understand how public health positively affects the physical, mental and social well-being of communities. The Utah Department of Health developed a computer based training (CBT) called "*Adventures in Public Health*" to formally introduce its employees to public health. This presentation describes Utah's experience of CBT development, evaluation, and final implementation as a component of new employee orientation.

Methods: In order to evaluate the CBT, one hundred and fifty full time employees were randomly selected and assigned to either an intervention group or control group. The formal evaluation included pre and post-tests to measure the changes in 3 domains: knowledge, motivation and self-efficacy in understanding and participating in public health.

Results: Of the 150 employees selected, 70% completed the pre-test. Of these, 58 employees were in the intervention group and 47 employees were in the control group. During the pre-test, only one in four participants could define public health whereas after the training, over half could define public health. There was a 36% increase in self-efficacy levels in discussing public health issues and a 28% increase in participants' confidence levels in understanding the basics of public health.

Conclusion: "*Adventures in Public Health*" demonstrated remarkable success. There were many positive changes in the areas of knowledge, motivation, and self-efficacy and an increase in confidence levels in understanding and participating in public health activities. Based on these findings, the Utah Department of Health has implemented this training into the New Employee Orientation.

Public Health Implication: This study illustrates how CBT is a cost-saving strategy compared to in-person training expenses. Public health workforce development efforts may benefit by utilizing this mode of training.

ABSTRACTS

#122 - Poster Session

WORKFORCE DEVELOPMENT ACTIVITIES IN UTAH: AN EVALUATION OF ANALYTIC TRAINING

Shaheen Hossain, PhD, Nan Streeter, MS, RN, Sharon Talboys, MPH, George Delavan, MD, Tara Johnson, BS, Utah Department of Health

Background: In February 2001, the Utah Department of Health, Division of Community and Family Health Services (CFHS) conducted a training needs assessment survey among senior supervisory staff in order to identify training needs. The Core Public Health Competencies developed by the Council on Linkages were utilized for this survey. Results of the survey indicated low proficiency levels in the area of assessment and analytic skills. In order to enhance skills of the CFHS managerial staff in the analytic domain, a workshop was arranged by the Utah Data Training Committee with the funding and technical assistance from the Association of Maternal and Child Health Programs (AMCHP). This presentation describes the workshop planning, implementation, and evaluation.

Methods: The workshop was specifically tailored for public health program managers, bureau directors, and some data staff in the Division. The workshop evaluation tool included pre and post-tests and measured changes in the area of analytic and assessment skills, public health science domain, and understanding of essential public health services.

Results: A total of 47 people, including almost all program managers in CFHS attended the training. Eighty-four percent indicated that the workshop met their expectations. Notable improvement was seen for all participants. For example, the proportion stating that they were *proficient* at making relevant inferences from data increased from 36% before the training to 70% after the training. During the pre-test, one in four participants considered themselves *proficient* in assessing health status and understanding determinants of health and illness. However, in the post-test, 60% reported to be *proficient* in the above area.

Conclusion: This initiative was undertaken with the goal to enhance public health infrastructure. Analytic competencies cut across all public health programs and apply to all public health professionals. The intent of the training was to increase the individual capacity to address public health core functions of assessment. Based on the participants' responses on the pre and post-test, the training was a success.

Public Health Implication: The value of understanding the analytic competencies and expectations of public health and its effect on improving the quality of public health practice cannot be underestimated.

ABSTRACTS

#123 - Session A3

MEASURING SOCIOECONOMIC STATUS/POSITION IN STUDIES OF RACIAL/ ETHNIC DISPARITIES: EXAMPLES FROM MATERNAL AND INFANT HEALTH

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Background: Theoretical and empiric considerations raise concerns about how socioeconomic status/position (SES) is often measured in health research. We aimed to guide the use of two common socioeconomic indicators, education and income, in studies of racial/ethnic disparities in low birth weight, delayed prenatal care, unplanned birth, and breastfeeding intention.

Methods: A statewide postpartum survey in California (n=10,055) was linked to birth certificates. Overall and by race/ethnicity, we examined: (1) correlations among several measures of education and income; (2) associations between each SES measure and health indicator; and (3) racial/ethnic disparities in the health indicators adjusting for different SES measures.

Results: Education-income correlations were moderate and varied by race/ethnicity. Racial/ ethnic associations with the health indicators varied by SES measure and how it was specified, and by health indicator and race/ethnicity. For example, one would conclude that compared with European Americans, Latinas were at around twice the risk of delayed prenatal care controlling for the log of income, but at no increased risk controlling for maternal education (years) or poverty level.

Conclusions: Conclusions about the role of race/ethnicity could vary with how SES is measured. Education is not an acceptable income proxy among ethnically diverse childbearing women. Based on theoretical considerations and these and previous examples, SES measures should generally be outcome- and population-specific, and chosen on explicit conceptual grounds; researchers should test multiple theoretically appropriate measures and consider how conclusions might vary with how SES is measured. Researchers should recognize the difficulty of measuring SES and interpret findings accordingly.

Public Health Implications. Policies and programs based on assuming that differences between racial/ethnic groups are either inherently biological or based in deep-seated cultural differences should be re-assessed in light of the findings from this study. Furthermore, it is not valid to conclude that socioeconomic factors are unimportant in relation to a given outcome, based on measuring only very limited aspects of socioeconomic status/position; recognizing this also could have important implications for policies. The conclusions from studies —including but not limited to studies of racial/ethnic differences —that have claimed to have controlled for socioeconomic status should be re-assessed.

ABSTRACTS

#124 - Session B2

THE EFFECT OF 2000 CENSUS-LEVEL POPULATIONS ON TEENAGE BIRTH RATES FOR STATES IN THE 1990s

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Background: Birth rates for teenagers differ considerably by race and Hispanic origin as well as by State. Data from the 2000 Census demonstrated that important factors affected the trends and differentials in teenage birth patterns reported for the 1990s that had been based on population estimates projected from the 1990 Census. These factors include unanticipated immigration and state-to-state migration. Population estimates for the 1990s based on the 1990 Census for Hispanic and American Indian women, in particular, were substantially understated. Thus, teenage birth rates initially published for these groups were much

Methods: This presentation will focus on disparities in teenage birth rates for states. Data used will be birth certificate files from the National Center for Health Statistics. Recently, the Population Estimates Program of the U.S. Census Bureau produced, with support from the National Cancer Institute, a series of revised intercensal estimates. Rates based on the 2000 census-level populations will be compared with the originally published rates, based on the 1990 Census. The analysis will focus on the period 1991-99 when teenage birth rates dropped steeply across the Nation. Disparities in rates by race/ethnicity will be examined for selected states. Trends based on the revised rates will be compared with trends based on the originally published rates for selected states.

Results: The revised birth rates for teenagers by race/Hispanic origin and State differ considerably from the originally published rates for Hispanic and American Indian teenagers in particular. For the U.S. as a whole, the originally published rates for Hispanic and American Indian teenagers, for example, were overstated by about 7 and 15 percent, respectively.

Conclusions: The accurate measurement of fertility patterns and trends depends on the use of reliable denominator data for computing population-based rates.
Public Health Implications: Birth rates for teenagers are key measures for state health departments and policy makers who are striving to reduce teen childbearing. Accurate measurement of teenage childbearing is critical so that scarce resources are used most effectively.

ABSTRACTS

#125 - Poster Session

EARLY MATERNAL THYROIDAL INSUFFICIENCY (EMTI) IS A TREATABLE AND PREVENTABLE CAUSE OF NEURODEVELOPMENTAL DEFICITS- IS IT TIME TO SCREEN?

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Background: Insufficient thyroid supply to the newborn is a major source of neurodevelopmental deficit. To prevent this, neonatal thyroid screening programs have been implemented and found to be effective. Insufficient thyroid supply to the fetus is now seen as a major source of neurodevelopmental deficit. However, screening programs for early maternal thyroidal insufficiency [EMTI] have yet to be implemented.

Methods: Review of literature on physiology and epidemiology of thyroid-dependent fetal growth and development has been conducted.

Results: Adequate thyroid supply is essential for fetal growth and development. In early pregnancy, prior to the initiation of fetal thyroid hormone production, the fetus is solely dependent on the maternal supply of thyroxine. Developmental studies [Levado-Autric, 2003] demonstrate fetal thyroxine need prior to development of fetal thyroid. Five independent studies [Man and Jones, 1969; Liu, 1994; Haddow, 1999, Pop, 1999, and Smit, 2000] yield the conclusion that the developing fetus suffers if maternal thyroidal supply is insufficient in early pregnancy [EMTI]. EMTI can be diagnosed on the basis of the free thyroxine level [fT_4] in maternal serum during the first trimester. The studies also demonstrate that adequate thyroxine supply by the beginning of the second trimester is sufficient to protect the fetal development. Prevalence studies suggest that the rate of EMTI may be as high as 5 %.

Conclusions: A trial program of screening for EMTI with maternal free thyroxine levels obtained at the first pre-natal visit can determine the feasibility and efficacy of proposing universal screening for EMTI in the United States.

Public health Implications: Early Maternal Thyroidal Insufficiency (EMTI) may be a significant treatable cause of neurological deficits in the United States today. Screening for maternal hypothyroxinemia at the first pre-natal visit may provide a new avenue for reducing the burden of neurodevelopmental deficits in our children.

ABSTRACTS

#126 - Session D6

PREGNANCY OUTCOME PATTERNS FOR SELECTED BIRTH DEFECTS IN TEXAS

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Increased availability of techniques to diagnose birth defects prenatally has raised questions among expectant families and healthcare providers, including questions about likely pregnancy outcomes for particular birth defect. We used Texas Birth Defects Registry data for 1996 and 1997 to examine pregnancy outcomes for 49 birth defects. Pregnancy outcomes monitored by the registry for 1996 and 1997 included live births of any gestation, spontaneous fetal deaths of at least 20 weeks gestation or 500 grams birth weight, and elective terminations of any gestation.

Many birth defects resulted almost exclusively in live births. For example, 100% of the cases of pyloric stenosis and 99.7% of the cases of atrial septal defect were live births. Live births comprised 95% or more of the total cases for 28 of the 49 conditions examined.
Some birth defects often resulted in spontaneous fetal deaths at 20 or more weeks of gestation. Examples include anencephaly (26.2%); agenesis, aplasia, or hypoplasia of the lung (12.4%); and renal agenesis or dysgenesis (10.4%).

Certain conditions frequently resulted in elective pregnancy terminations, generally those which are amenable to prenatal diagnosis and which have poor prognoses. Elective terminations made up 43.0% of all anencephaly cases detected; 20.6% of total anencephaly cases were terminations at 20 or more weeks of gestation and 22.4% were terminations before 20 weeks.

Other conditions frequently found among elective terminations included encephalocele (14.3% of all cases were elective terminations at 20+ weeks and 17.1% were terminations before 20 weeks); Patau syndrome (15.6% elective terminations at 20+ weeks and 15.6% terminations before 20 weeks); Edwards syndrome (18.2% elective terminations at 20+ weeks and 10.2% terminations before 20 weeks); and omphalocele (14.7% elective terminations at 20+ weeks and 13.2% terminations before 20 weeks).

Analyses will be repeated to include more recent data. Results will be shown in tabular form and pie charts will be included for selected conditions.

Implications of this analysis will be discussed, including the need for birth defects registries to collect information on pregnancy outcomes other than live births and the usefulness of this type of analysis to clinicians.

ABSTRACTS

#128 - Session B4

CASE REVIEWS OF RARE CONDITIONS AS AN MCH TOOL TO IMPROVE FOLLOW UP AND PREVENTION STRATEGIES – GEORGIA EXPERIENCE

Violanda Grigorescu, Georgia Division of Public Health/MCH Epidemiology Section

Background: Hospital A reported a recent maternal death due to peripartum cardiomiopathy (PPCM)-a rare life threatening cardiomyopathy that occurs in the peripartum period in previously healthy women. Risk factors identified in the literature include multiparity, advanced maternal age, multifetal pregnancy, preeclampsia and gestational hypertension, and race (Black). Hospital A was concerned about other PPCM cases and thus Georgia Division of Public Health (GDPH) was called for investigation.

Methods: Potential cases over a six years period were identified using the Hospital A discharge system. Comprehensive chart review was performed by obstetrically and epidemiologically trained staff from GDPH. Information from the medical records was collected using a semi-structured questionnaire and analyzed to provide descriptive statistics.

Results: Chart review identified 13 cases of PPCM for 1997 to 2002 from 19 potential cases. Only one of the PPCM cases was a pregnancy-related death. Only one case per year was identified for the first four years followed by an increase to four cases in 2001 and five cases in 2002. The majority (12 = 92.3%) developed symptoms and were diagnosed during the postpartum period. The age distribution showed a majority of cases to women of 20-34 years of age (9 = 69.2%). Nine cases occurred among White women and four among Black women. Six (46.2%) were multiple pregnancies. Four cases (30.8%) developed pregnancy-associated hypertension prior to PPCM diagnostic. Ten infants (76.9%) were born at full-term.

Conclusions: Investigation of a single maternal death revealed greater problems with maternal morbidity that required further exploration. Given the national incidence, a cluster of PPCM cases was identified at Hospital A. Potential causes for the cluster were not identified. Hospital A has now established a monitoring system for PPCM cases.

Public Health Implications: Potentially fatal health problems among PPCM cases highlight the need for improved long-term follow up among these women. Successful intervention to reduce maternal morbidity and its effects will require collaboration between clinicians, hospitals and public health professionals. MCH case reviews can be used as a tool to improve this collaboration.

ABSTRACTS

#129 - Session B5

PRENATAL CARE (PNC) PROVIDER SCREENING FOR INTIMATE PARTNER VIOLENCE (IPV), CALIFORNIA, 1999-2000

Wells, Kim, California Department of Health Services (DHS)

'**Background:** IPV, defined here as sexual and physical abuse, has been associated with gynecologic and obstetrical problems. The American College of Obstetricians and Gynecologists recommends that physicians screen all patients for IPV. The purpose of this study was to identify social-demographic factors associated with health care provider screening for IPV during PNC.

Methods: We analyzed 1999 and 2000 data from the California Maternal and Infant Health Assessment (MIHA) survey, a representative survey of postpartum women (n=7,044) who gave birth to a liveborn infant. Multiple logistic regression was conducted to find the association between screening for IPV and respondent social-demographic characteristics.

Results: About 5.8% of the respondents reported that they were IPV victims in the 2 years prior to the birth of their child. Overall, 22.6% of the respondents indicated that their PNC providers asked about IPV, with 33.9% of IPV victims being asked, compared to 21.8% of non-victims ($p<0.001$). Women who were asked about IPV were more likely to have Medi-Cal as a source of payment for PNC (OR, 2.1; 95% confidence interval (CI), 1.8-2.4), be younger than 30 (OR, 1.5; 95% CI, 1.3- 1.7), a victim of IPV in the last two years (OR, 1.4; 95% CI, 1.1-1.7), non-white (OR, 1.3; 95% CI, 1.1-1.5), less educated (high school education or less) (OR, 1.2; 95% CI, 1.0-1.4), and unmarried (OR, 1.1; 95% CI, 1.0-1.3).

Conclusions: Although PNC providers are screening women at greater risk of experiencing IPV, these findings suggest that most patients are not screened for IPV during PNC and most IPV cases are missed. Further PNC provider education about screening for IPV is needed.

Public Health Implications: Although women may underreport whether they were screened for IPV, this study suggests that PNC providers are not asking ALL women about IPV. More research is needed to determine how to increase screening rates.

ABSTRACTS

#130 - Session E1

COMPARISON OF THREE PRENATAL CARE INDICES AND THEIR ASSOCIATION WITH SMALL FOR GESTATIONAL AGE (SGA)

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Background: Prenatal care is a frequently used preventative health service in the United States. Inadequate or no prenatal care has been associated with increased risk of small for gestational age (SGA). This study compared associations between three common measures of prenatal care utilization and SGA.

Methods: Data for singleton births 37-42 weeks gestation were obtained from the US 2000 Natality file. Each of three prenatal indices, trimester of first prenatal care visit, Kessner index, and Adequacy of Prenatal Care Utilization index (APNCU) was separated into commonly used categories. Fetal growth was dichotomized as either SGA or non-SGA based on the 10th percentile for gestation. Risk of SGA was tabulated for the three indices, stratified by race/ethnicity. Separate race-specific logistic regression models for APNCU were used to examine the association of prenatal care and SGA with a focus on intensive care, after accounting for other maternal characteristics.

Results: Overall, white women were most likely to receive adequate prenatal care or to be enrolled in prenatal care in the first trimester. Compared to adequate prenatal care the risk of SGA increased with the later initiation of prenatal care regardless of maternal race/ethnicity. For example the relative risk for inadequate compared to adequate care in the Kessner index ranges from (RR=1.44-1.85) for all race/ethnicity groups. In the APNCU intensive care group, risk of SGA was highest among white (RR=1.07) women and decreased for black (RR=0.95) and Hispanic (RR=0.97) women. White women in the intensive group were younger and had lower educational attainment than black women. After adjustments, odds ratios for SGA by APNCU were similar among the race/ethnicity groups, although the odds ratio for white women with intensive care remained slightly higher (OR=1.02) than for black (OR=0.98) and Hispanic (OR=0.99) women.

Conclusion: Our study demonstrated that prenatal care measured by these indices has similar associations in predicting SGA. However racial and ethnic differences were evident in the SGA risk profile for women in the intensive group.

Public Health Implications:
Generally the three measures have similar associations, but special attention should be taken when making associations between women with intensive prenatal care.

ABSTRACTS

#131 - Session B2

USING NEIGHBORHOOD TYPES TO IDENTIFY POPULATIONS AT RISK FOR POOR BIRTH OUTCOMES

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Background: High risk pregnancy continues to be prevalent in the United States. Additionally, there are well-documented disparities in birth outcomes. This study is to explore the use of neighborhood types to identify and target populations at risk for poor birth outcomes.

Methods: Ohio geocoded 2001 birth data were linked to the U.S. 2000 Census by block group, the smallest geographic unit in the Census Summary File 3. Block groups were categorized based on: percentage of white and black population, percentage of rural households, and income per capita in 1999 within each block group. This resulted in the construction of 12 neighborhood types: urban white low, medium and high income (UWLI, UWMI, UWHI); urban black low, medium and high income (UBLI, UBMI, UBHI); urban mixed low, medium and high income (UMLI, UMMI, UMHI); and rural low, medium and high income (RLI, RMI, RHI). Rural neighborhoods were not differentiated by race because less than 2% of the population in this region was black and/or other races. Poor birth outcomes such as low birth weight; and high risk pregnancy factors, such as maternal smoking during pregnancy and prenatal care, were analyzed by these 12 neighborhood types.

Results: All the black neighborhood types, regardless of income level, were more likely to have poor birth outcomes than the white or mixed neighborhoods. UWHI neighborhoods were least likely to have poor birth outcomes among the neighborhood groups. Results showed that income had almost no impact on pregnancy risk factors in the rural neighborhoods. RMI neighborhoods were less likely to have poor birth outcomes than UWMI neighborhoods. UWLI neighborhoods were twice as likely to have risk factors than UWMI neighborhoods.

Conclusions: In order to reduce high risk pregnancy and poor birth outcomes, maternal health inequalities should be explored by neighborhood type. Disparities among different residential areas will be clearer to public health practitioners once birth outcomes and maternal risk factors are mapped using geocoded data.

Public Health Implications: This study of neighborhood types will help state agencies target funding and help local health planners implement prevention and intervention programs more scientifically and efficiently.

ABSTRACTS

#132 - Session D5

BREASTFEEDING AMONG NEW MOTHERS: ASSOCIATIONS BETWEEN HOSPITAL STAFF'S ENCOURAGEMENT, BREASTFEEDING INITIATION IN THE HOSPITAL, AND BREASTFEEDING DURATION

Curt Miller, BS; Youjie Huang, MD, DrPH
Florida Department of Health, Bureau of Epidemiology

Background: Research indicates that human breast milk provides a wide range of health benefits to infants and mothers. This report identifies associations between hospital staff's encouragement of breastfeeding among new mothers during their postpartum hospital stay, breastfeeding initiation in the hospital, and breastfeeding duration among new mothers in Florida.

Methods: We analyzed the 2000 Florida Pregnancy Risk Assessment Monitoring System (PRAMS) dataset using logistic regression and controlling for demographic variables, such as race/ethnicity and age.

Results: Breastfeeding initiation during postpartum hospital stay is correlated with whether the new mother was encouraged by hospital staff to breastfeed on demand (OR=13.5; CI 9.4, 19.5). Other factors, such as race/ethnicity and level of education, had significant, yet smaller effects on initiation of breastfeeding in the hospital. Among women who received encouragement by hospital staff to breastfeed on demand, 90.8% initiated breastfeeding during their postpartum hospital stay. Breastfeeding activity is correlated with the initiation of breastfeeding during a new mother's postpartum hospital stay (OR=38.0; CI 22.9, 63.2) Of mothers who reported breastfeeding at all, 91.3% initiated breastfeeding in the hospital. Breastfeeding duration of at least 3 months is correlated with breastfeeding initiation during postpartum hospital stay (OR=3.20; CI 1.3, 8.2). Among mothers who breastfed for at least 3 months, 90.4% had initiated breastfeeding in the hospital.

Conclusions: Hospital staff play an important role in whether new mothers breastfeed their newborns. Their encouragement significantly contributes to a new mother's initiation of breastfeeding in the hospital, and that initiation significantly contributes to the duration of breastfeeding.

ABSTRACTS

#133 - Session E7

ASSOCIATIONS BETWEEN PRENATAL MATERNAL STRESS, CIGARETTE SMOKING, AND LOW-BIRTH-WEIGHT OUTCOMES

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Florida Department of Health, Bureau of Epidemiology

Background: Maternal stress is associated with adverse birth outcomes even after adjustment for maternal demographics and behaviors.[1] This report identifies significant associations between specific stress factors and maternal cigarette smoking during pregnancy, and low-birth-weight outcomes among women in Florida.

Methods: The data analyzed was from the 2000 Florida Pregnancy Risk Assessment Monitoring System (PRAMS).

Results: Of women who had bills they could not pay, 14.9% smoked cigarettes during pregnancy, while 7.0% of those who could pay their bills smoked during pregnancy. Among women who were divorced or separated, 22.2% smoked during pregnancy, while only 7.6% of those who were not divorced or separated smoked.
We identify a relationship between stress and low-birth-weight births. The death of a close friend or family member, and the experience of going to jail both maintain an independent association with low-birth-weight outcomes. The prevalence of low-birth-weight outcomes among women who experienced the death of a close friend or family member was 8.8% compared to 6.9% among those who experienced no such loss. The highest percentage of low-birth-weight outcomes (11.5%) was among women who reported that either they or their husband or partners went to jail compared to 7.0% among women who did not report such a stressful event.

Conclusions: Additional stress factors will be presented along with their respective association to maternal smoking during pregnancy. This information could be used to develop and evaluate efforts to reduce stress among pregnant women, as well as to reduce low-birth-weight outcomes.

ABSTRACTS

#134 - Poster Session

PREPREGNANCY MATERNAL BODY MASS INDEX AND PREGNANCY OUTCOMES AMONG FLORIDA WOMEN

Curt Miller, BS; Youjie Huang, MD, DrPH
Florida Department of Health, Bureau of Epidemiology

Background: Pregnancy is a critical period when good maternal health plays a vital role in the health of both a mother and her baby. A healthy pregnancy is without physical complications from the time of conception to the delivery of a healthy baby. Bringing maternal weight into a healthy range before becoming pregnant makes conception easier and improves pregnancy outcomes.

Methods: The data analyzed was from the 2000 Florida Pregnancy Risk Assessment Monitoring System (PRAMS).

Results: This report describes maternal pre-pregnancy weight-for-height status (measured in BMI) and its relationship to: (a) pregnancy outcomes; (b) maternal health factors; and (c) to describe the socio-demographics of women who are at risk of pre-pregnancy underweight, overweight, or obesity, among Florida women in 2000. For example, 30.9% of obese women delivered by Cesarean Section. The prevalence of diabetes during pregnancy (20.3%) was highest among obese women. The prevalence of hypertension during pregnancy (26.9%) was highest among obese women. The prevalence of urinary tract infections during pregnancy was highest among underweight women (25.2%). Non-Hispanic black women had the highest prevalence of pre-pregnancy obesity (20.6%). Among underweight women the prevalence of low-birth-weight births (9.8%) was significantly higher than among their normal-weight counterparts (6.8%). The prevalence of newborns who spent more than two nights in the hospital was significantly higher among those born to obese mothers than among those born to both underweight mothers and normal-weight mothers.

Conclusions: Information in this report could contribute to the understanding about the relationships between prepregnancy maternal BMI, birth outcomes, and maternal health conditions.

ABSTRACTS

#135 - Session B6

AMERICAN INDIAN WOMEN'S TRUST AND INVESTMENT IN A COMMUNITY INITIATED RESEARCH PROJECT

Denise Wolf, Rebecca Mautz, Norma Gray
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Background: Investment and ownership are necessary components of research implementation in American Indian communities. Participatory methodologies are particularly vital due to the history of objectification and exploitation by researchers with no tangible improvement in community health following the contributions of subjects. This ten-session alcohol abuse prevention intervention with American Indian women of a Southwest Tribe includes coalition involvement and intensive efforts to develop trust that lead to personal investment in the project as well as community ownership.

Methods: Prior to implementation, community members and cultural leaders provided valuable information on integrating cultural values into the research process. Trust is promoted through the use of one-on-one contact with women familiar with the community. An intensive interview is completed that allows women to discuss their health and social history. For some, this is the first time to disclose significant trauma. A welcoming, safe environment in addition to resource coordination and community outreach promote a sense of continuity and validation for participants.

Results: Indicators of relevancy and trust experienced by women in the program include a high rate of direct referrals by previous participants as well as willingness to maintain contact with the program for the rigorous follow-up interview requirements. **Conclusions:** The alignment of research methods with culture is imperative to any process that seeks to improve the well-being of Native Nations. Women involved in this wellness program display high levels of investment as indicated by direct referral of family members and friends as well as verbal and written evaluation responses.

ABSTRACTS

#136 - Session B6

PERCEIVED HEALTH AND SENSE OF PERSONAL CONTROL AMONG WOMEN IN A SOUTHWEST AMERICAN INDIAN TRIBE

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Background: American Indian women demonstrate their resiliency and strength throughout their lives as they raise families and preserve loving homes. These issues are explored in the SAMHSA CSAP funded wellness program that is being implemented with women in a Southwest American Indian Tribe.

Methods: Prior to attending ten culturally based wellness classes, participants complete an extensive interview that includes providing information about their background, traumatic life events, perception of health, sense of personal control, symptoms of depression and identification with their American Indian culture.

Results: The data presented here are from the first 84 participants (mean age is 31.5 and mean number of years of education is 10.7). Participants were divided into four groups based on their responses to perceived health and personal sense of control. Women who reported good health and a high sense of control (n=32) comprised 38% of the sample and had the lowest prevalence of depression (13%). Women who reported poor health and low control (n=14) had the highest prevalence of depression (62%). The prevalence of a history of alcohol abuse followed the same pattern. However, social support, stressors, identification with American Indian culture, educational level, employment status, and prevalence of recent alcohol use were similar among groups.

Conclusions: In spite of being faced with the stress of discrimination and frequent traumatic life events, many American Indian women have learned ways to cope. It appears that crucial elements of positive coping are to preserve one's health and to gain a sense of personal control.

ABSTRACTS

#137 - Session B6

USING FORMATIVE RESEARCH TO DESIGN COMMUNITY AND FAMILY-BASED INTERVENTION TO ADDRESS TODDLER OBESITY AND EARLY CHILDHOOD CARIES: TODDLER OBESITY AND TOOTH DECAY PREVENTION PROJECT, (TOTS), NPAIHB.

Tam Lutz, Cheryl Ritenbaugh, Njeri Karanja, Gerardo Maupome
Northwest Portland Area Indian Health Board, Portland Oregon

Background: Currently AI/AN youth experience extremely high rates of childhood obesity. Obesity is a major risk factor for type 2 diabetes, increasingly diagnosed at younger ages among AI/ANs. Concurrent with the increases in obesity and diabetes is a major shift from traditional diet. One of the most prominent changes is a great increase in the consumption of sugared beverages especially among AI/AN youth. Simultaneously, AI/AN youth have the highest reported rates in the U.S. of early childhood caries (ECC), known to be strongly related to frequent consumption of simple sugars. Purpose: The overall aim of the Toddler Obesity and Tooth Decay Prevention Project (TOTS) is to test whether community and family-based interventions can alter patterns of sugared-beverage consumption and whether such behavioral changes can reduce the incidence of early childhood obesity and caries.

Methods: Before TOTS could create tribal specific interventions, efforts were focused on collecting formative data including community mappings, observations, key informant interviews and focus groups.

Results: Formative data collection provided rich information that described the community, the community's resources, and the community's attitudes, beliefs, and traditions. Formative data collection has shown variability in breastfeeding patterns and water quality and beliefs and provides guidance for carefully tailored community interventions.
Conclusions: This approach of designing interventions takes advantage of the cultural value placed by American Indians in including future generations, the elders, family and community networks in resolving problems in the community.

ABSTRACTS

#138 - Session B6

FACTORS ASSOCIATED WITH AMERICAN INDIAN TEENS' SELF-RATED HEALTH.

Tassy Parker, University of New Mexico, Albuquerque, NM

Background: This cross-sectional investigation used data from the Voices of Indian Teens (VOICES) Project (N=574) to examine factors related to American Indian (AI) high school students' self-rated health. Findings were compared to published reports of self-rated health for samples of U.S. and Canadian adolescents.

Methods: Independent variables included in the self-rated health model included: age; gender; family finances; single-parent family; family support; school achievement; tobacco, alcohol, cannabis use; self-esteem; and social competence. Multiple regression analysis was employed to examine the relationships between these factors and the Indian students' health appraisals.

Results: Overall, 19.1% of the AI students reported "fair" or "poor" health, a percentage almost three times that for U.S. high school students in general. Statistically significant relationships were found between positive self-rated health and being male, having higher levels of school achievement, and social competence. More negative health ratings were statistically significantly related to cannabis use.

Conclusions: In general, AI teens' self-rated health was both similar and dissimilar to that of teens in the comparison studies in important ways. Efforts targeting the teens' perceptions of academic achievement and social competence as well as substance use prevention/intervention efforts may also improve their self-rated health. However, longitudinal study is necessary in order to define the causal order of the self-rated health relationships.

ABSTRACTS

#139 - Session E4

COMPARING STATES USING SURVEY DATA ON HEALTH CARE SERVICES FOR CHILDREN WITH SPECIAL HEALTH CARE NEEDS

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Research Objective: This presentation offers a look at state-by-state differences for over a dozen key indicators of health, health insurance, access to care, and family impact for children with special health care needs (CSHCN). Alternative ways to create composite rankings from these key indicators will be proposed.

Study Design: Data from the National Survey of CSHCN were analyzed within each state and the District of Columbia for 15 key indicators, including the proportion of CSHCN whose condition greatly or often affects their ability to do things other children do, with 11 or more days of school absences due to illness, without insurance at some time in past year, with any unmet need for specific health care services, with any unmet need for family support services, without a usual source of care, without a personal doctor or nurse, without family centered care, with out-of-pocket medical expenses exceeding $1,000, with family financial problems due to the condition, with families who spend 11 or more hours per week providing or coordinating care, and with family members whose employment has been affected by the condition.

Data Source: The National Survey of CSHCN was funded by the Maternal and Child Health Bureau, Health Resources and Services Administration, and was conducted by the National Center for Health Statistics, Centers for Disease Control and Prevention. In 2001, this random-digit-dial telephone survey identified and selected approximately 750 children with special health care needs from each state and the District of Columbia.

Principal Findings: Composite rankings are related to state-by-state differences in the income levels of households with children and households with CSHCN. Factor analytic methods permit the creation of a composite rank that is not correlated with income.

Conclusions: States differ, sometimes substantially, on the health care service needs of CSHCN within their state.

ABSTRACTS

#140 - Session E4

FROM DATA TO ACTION: MAXIMIZING THE VALUE OF THE NATIONAL SURVEY ON CHILDREN WITH SPECIAL HEALTH CARE NEEDS TO CREATE SUSTAINABLE STRATEGIES FOR ADVANCING NATIONAL GOALS FOR CSHCN

Christina Bethell, PhD, MBA, MPH, Center for Health Research, Portland Oregon, Director, The Child and Adolescent Health Measurement Initiative (CAHMI)

Background: Significant investments are made to collect data such as the groundbreaking National Survey on Children With Special Health Care Needs. Yet, historically, this type of data is significantly underused and often misused in national, state and local efforts to understand and improve the health of children and or to assess and stimulate improvements in the performance of public and private sector health programs. The NSCSHCN involved a complex sampling design and includes many variables that are meant to work together in complex ways to identify key groups of CSHCN and understand their needs and performance of systems of care. Efforts to support effort to use this data appropriately and effectively are essential to advancing national goals for improving care for CSHCN.

Methods: Input from over 80 states and family leaders led to the identification of methods and strategies for ensuring the use of the NSCSHCN by state and family leaders to advance the achievement of health goals for CSHCN. Prototype data access, data analysis and data communication templates were specified and evaluated by Title V and Family Voices leaders from over 20 states. Health care quality measurement and improvement projects with eight states participating in The Child and Adolescent Health Measurement Initiative (CAHMI) State Learning Network provide concrete examples of the of how these strategies and methods might be implemented.

Results: Findings from state and family input and the CAHMI State Learning Network have been translated into an online direct data query tool as well as a series of data analysis and communication guidelines and templates states can use in (1) conducting needs assessments (2) informing and supporting within state cross-agency collaborative efforts to create system change (3) meeting federal and state performance reporting requirements (4) informing and stimulating supportive state policies and quality improvement efforts and (5) build technical capacity to use the current and future versions of the NSCSHCN and similar data sets such as the upcoming National Survey on Children's Health.

Conclusions: Many innovations in access to and communication of the NSCSHCN can lead the way to maximizing the use of the NSCSHCN. It is essential that investments in the NSCSHCN and similar surveys be maximized to ensure the future collection of similar data. The power of data to inform and stimulate change is often underestimated. Yet, few concrete improvements in systems of care for CSHCN have or can occur without creative and effective use of data such as the NSCHCN.

Public Health Implications: When used effectively, evidence-based policy and practice are advanced by data such as the NSCSHCN. The value of all national survey initiatives are improved when accompanied by responsive and effective strategies to ensure the optimal use of this information to advance national health goals.

ABSTRACTS

#141- Session E4

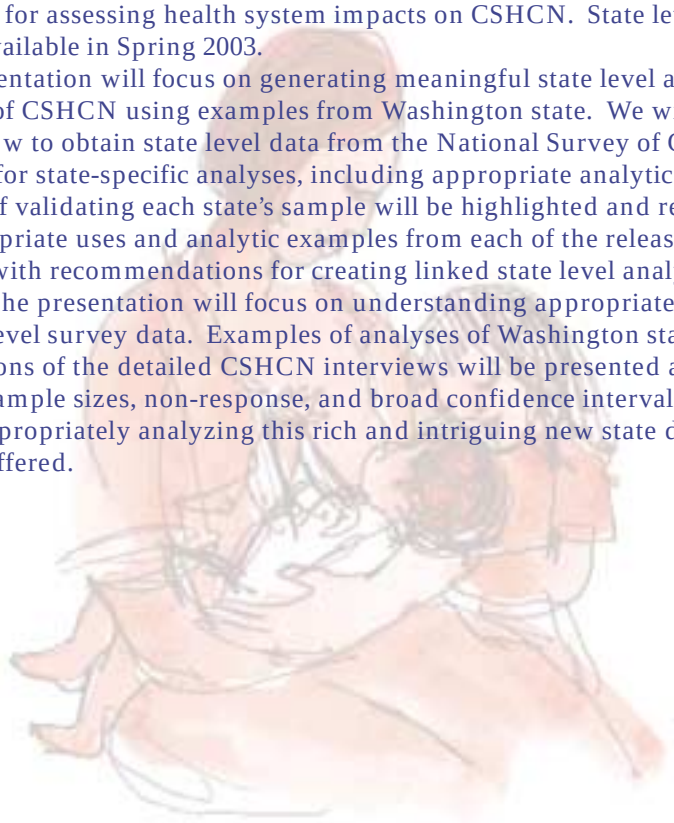
ANALYZING STATE DATA FROM THE NATIONAL SURVEY OF CSHCN

Virginia L. Sharp, MA

The National Survey of Children with Special Health Care Needs was designed to establish uniform state, regional, and national prevalence estimates of children with special health care needs (CSHCN) under 18 years of age. The survey also provides state, regional, and national data for assessing health system impacts on CSHCN. State level data from the survey became available in Spring 2003.

This presentation will focus on generating meaningful state level analyses from the National Survey of CSHCN using examples from Washington state. We will begin by demonstrating how to obtain state level data from the National Survey of CSHCN and outline steps for using it for state-specific analyses, including appropriate analytic software packages. The importance of validating each state's sample will be highlighted and resources for doing so provided. Appropriate uses and analytic examples from each of the released data files will be presented along with recommendations for creating linked state level analytic files.

Much of the presentation will focus on understanding appropriate (and inappropriate) uses of the state level survey data. Examples of analyses of Washington state's data from each of the major sections of the detailed CSHCN interviews will be presented and critiqued. Issues related to small sample sizes, non-response, and broad confidence intervals will be addressed. Guidelines for appropriately analyzing this rich and intriguing new state data source on CSHCN will be offered.



ABSTRACTS

#LB 3 - A6

STATE-LEVEL, POPULATION-BASED SURVEILLANCE ON WOMEN'S HEALTH: THE CALIFORNIA WOMEN'S HEALTH SURVEY

Marion W. Carter, Ph.D., the California Women's Health Survey Group, John Santelli, M.D., Centers for Disease Control and Prevention, Division of Reproductive Health

Background: While most state health departments have some key sources of state-level, population-based data on health (e.g. BRFSS, state YRBS, and PRAMS), data gaps remain, including in the area of women's health. California is the only state with an on-going surveillance survey that provides such data specifically on women's health: the California Women's Health Survey (CWHS). In this study we investigated the CWHS, in order to stimulate thinking on ways to strengthen state-level, population-based data collection on women's health in California and other states and to assess whether and to what extent the CWHS may serve as a model for other states to follow.

Methods: Based primarily on discussions with key stakeholders in the fall of 2002, this paper describes the origins, structure, process, and use of the CWHS and outlines some of the advantages and disadvantages of this particular system.

Results/conclusions: Factors that have facilitated the CWHS include high-level political support, the presence of motivated and capable individuals behind the survey, speedy public dissemination of at least some results, and the presences of an excellent, expert local survey research organization (SRG). This survey also shows how local ownership and collaboration can be real assets. The collaboration that characterizes every aspect of the survey helps ensure on-going usefulness of the survey and its results and has strengthened ties among programs. Collaboration also spreads costs and energy and thus strengthens feasibility of this surveillance tool. Disadvantages include the large amount of time and resources required from participating programs that are already stretched. Data utilization has been limited in some ways, and the system is vulnerable to budget and human resource shortfalls.

Public Health Implications: The CWHS provides invaluable data to various programs that address women's health issues within the California state government. While the CWHS structure would be hard to replicate in all settings, it offers various lessons and ideas for conducting state-level population-based surveillance on women's health in other states.

ABSTRACTS

#LB 9 - Session B4

ASSESSMENT OF THE INCIDENCE OF MATERNAL MORTALITY IN THE UNITED STATES, 1995-1997

Andrea P. MacKay, MSPH; Cynthia J. Berg, MD, MPH; Duran, Catherine, Jeani Chang, MS; Harry M. Rosenberg, PhD, National Center for Health Statistics, CDC; Division of Reproductive Health, CDC

Background Deaths from pregnancy complications remain an important public health concern. Nationally, two systems collect information on the number of deaths and characteristics of the women who died: National Center for Health Statistics reports maternal mortality through the National Vital Statistics System (NVSS); CDC's Division of Reproductive Health's Pregnancy Mortality Surveillance System (PMSS) conducts epidemiologic surveillance of pregnancy-related deaths. The numbers of deaths reported by these two systems have shown a continuing disparity; our objective was to determine the magnitude and nature of these differences.

Methods For 1995-1997, we compared maternal deaths in the Vital Statistics System with pregnancy-related deaths in the Surveillance System for the 50 States, DC, and NYC, using ICD-9 codes. Pregnancy-related deaths coded 630-676 were considered maternal deaths by Vital Statistics; those coded outside 630-676 were not. CDC Wonder Mortality files provided information on maternal deaths reported only by the Vital Statistics System.

Results There were 1387 pregnancy-related deaths in the Surveillance System and 898 maternal deaths in the Vital Statistics System; 54% of these deaths were reported in both systems, 40% in PMSS only, and 6% in NVSS only. Pregnancy-related deaths among Asian women and in the Western region were more likely to be classified as maternal deaths; pregnancy-related deaths due to hemorrhage, embolism, PIH, and anesthesia complications were more often classified as maternal than deaths from cardiovascular complications, medical conditions or infection. From the 1471 unduplicated deaths classified as maternal or pregnancy-related, we estimated an overall maternal mortality ratio of 12.6/100,000 live births for 1995-97, compared to 11.9 for PMSS and 7.7 for NVSS.

Conclusions The combined resources of NVSS and PMSS provide an enhanced assessment of maternal mortality in the U.S.

Public Health Implications Ascertainment of all maternal deaths is essential to monitor the frequency of maternal death and to approximate more closely the actual risk and impact of these deaths.

ABSTRACTS

#LB 10 - Session E3

PRENATAL CARE DISCUSSION OF HIV TESTING AMONG WOMEN HAVING A LIVE BIRTH IN 15 STATES, 1996-1999

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Background/ObjectivesS: In 1995, the U.S. Public Health Service recommended that pregnant women be offered voluntary counseling and HIV testing. We examined trends in prevalence of self-reported receipt of HIV counseling during prenatal care to assess the implementation of this recommendation.

Methods: Data come from the Pregnancy Risk Assessment Monitoring System (PRAMS). PRAMS is a state-specific, population-based surveillance system that collects information on maternal behaviors before, during, and after pregnancy from mothers 2-6 months postpartum. Data were collected using mailed questionnaires; nonrespondents were followed up by phone. Mothers were asked whether—during any prenatal care visit—a physician, nurse, or other health care worker had discussed their getting tested for HIV. Using SUDAAN, we analyzed weighted data from 15 PRAMS states with at least 2 years of data available during the period 1996 - 1999. Response rates were 70% or higher for each state in each year.

Resaults: In 1996, 59.6% (Oklahoma) to 79.2% (Alaska) of women reported that their health care provider talked with them about getting tested for HIV during prenatal care. In 1999, the prevalence ranged from 68.7% (Arkansas) to 88.4% (New York). In 6 states there was a significant increasing trend in HIV counseling; for 6 states without an increase, the initial prevalence was ≥ 75%. In most states in 1999, as maternal age increased, HIV counseling significantly decreased. In addition, Medicaid recipients, black women, and women with less than a high school education were more likely than other women to report HIV counseling.

Conclusions: These data indicate that several states made progress in implementing the 1995 recommendations for prenatal HIV counseling. The high and increasing prevalence in prenatal HIV counseling support the 2002 CDC recommendations to make HIV testing a routine part of prenatal care.

ABSTRACTS

#LB 11 - Session A2

PREVALENCE OF CHILDHOOD LEAD POISONING IN RURAL MINNESOTA

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Background. Most attention to the problem of lead poisoning has focused on urban areas. However, Minnesota is a largely rural state, with roughly half the population living outside the major metropolitan area of Minneapolis/St. Paul.

Methods. A comprehensive prevalence study was designed to test blood lead levels in all children less than 48 months old in a three-county area of west-central Minnesota. This area has a high proportion of homes built prior to 1950 and a relatively high rate of poverty, two of the major risk factors for elevated blood lead levels (EBLL, i.e. a blood lead level of 10 micrograms/dl or greater). Approximately 1,500 eligible families were asked to complete a one-page questionnaire about their child's possible exposure to lead poisoning risks and have their child's blood tested for lead. Recruitment occurred through a combination of mailed materials, face-to-face contact at WIC clinics and local medical clinics, and media publicity.

Results. Blood lead tests were obtained for 75% of eligible children. EBLLs were observed in 2.4% of tested children, and 0.5% of children had blood lead levels above 20 micrograms/dl. Receiving Medicaid or WIC assistance and spending time in pre-1950 housing were important determinants of EBLLs.

Conclusions. Rates of elevated blood lead levels in this rural area were lower than those seen in urban areas using the state surveillance system. However, rates in this rural area were similar to the rates observed in national health surveys.

Public Health Implications. We achieved greater awareness of lead issues by local physicians and the public, and developed a closer relationship with local public health and health care provider organizations. Targeted screening remains the most effective way to identify lead poisoned children in rural areas of Minnesota.

ABSTRACTS

#LB 12 - Session C2

UNENDORSED DENTAL SEALANT STATUS IN IOWA, 2000-2002: AN EXPERIENCE OF THREE YEARS STATEWIDE SURVEY

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Background: Since 2000, the Iowa Dept. of Public Health has implemented a survey plan to determine the number of third grader children with at least one permanent molar sealed. Additional information on sources of dental payment; free/reduced lunch participation; dental home status and dental visit habits were collected. This plan has been carried out for three years. Results from these surveys provide us the prevalence of dental sealant in Iowa, as well as assess a national performance measure for the state's annual Title V application.

Methods: Each spring, a computerized random sample was drawn from the state data bank. This sample covered all 26 Title V child-health agencies in Iowa, third graders only, and excluded schools with any kind of sealant endorsement program. The survey was conducted by dental hygienists from each agency. The screening was visual only with the use of a toothbrush to deflect the tongue and cheeks or to clean the teeth if necessary. The superintendents and school principals were informed and provided consent forms to be sent home to parents prior to the screening. Data was entered and analyzed by the use of SPSS. Comparison was cross-sectional among different groups and different years.

Results: Each year, about 5% of enrolled third graders were sampled. About 60% of those actually participated. Sealant rates for at least one molar sealed has shown an increase from 38.4% in 2000, to 41.4% in 2001 and 42.3% in 2002. The number of the same group children without dental insurance has decreased from 41% in 2000 to 34% in 2001 and 28.5% in 2002. While two-third of third graders visited a dentist every 6 months, there were still 12 % of them haven't seen a dentist recent three-year. Ninety percent of children reported having a dentist. Children on the free/reduced lunch or Medicaid/SCHIP program have lower rates of having a dental home, 6-month dental visits and sealed molar. Children without dental insurance have a slightly higher rate of having a dental home and 6-month dental visit than that of Medicaid/hawk-I children, but even lower rate of dental sealant.

Conclusions and Public Health Implications: Cooperation with contract agencies makes the statewide survey feasible and provides us good information, as well as providing the Title V agencies an opportunity to educate school administrations and families in their areas of the importance of sealant in preventing tooth decay.

ABSTRACTS

#LB 13 - Session B3

HOW HAWAI'I DEFINES UNINTENDED PREGNANCY IN 2000-2001 PRAMS DATA

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Background: Traditionally in PRAMS the question to determine unintended pregnancy has been: *Thinking back to just before you got pregnant with your new baby, how did you feel about becoming pregnant? I wanted to be pregnant sooner/I wanted to be pregnant later/I wanted to be pregnant then/I didn't want to be pregnant then or at any time in the future*. In 2000, a new question (*When you got pregnant with your new baby, were you trying to become pregnant? No/Yes*) was added to the survey, as a filter for the two following questions about contraceptive use. The purpose of this study was to determine the best measurement tool of pregnancy intendedness for the State of Hawai'i.

Methods: We performed a bivariate analysis of the demographic characteristics of Hawai'i PRAMS mothers delivering in 2000-2001. We compared women who possibly were ambivalent because they indicated that they didn't intend to be pregnant yet were '*trying to become pregnant*' with nonambivalent women (women who didn't intend to be pregnant and were NOT '*trying to become pregnant*'). Using SUDAAN we evaluated Chi-square tests for statistical significance.

Results: A total of 6,251 women were sampled and 5,009 (80%) responded. The weighted estimate for unintended pregnancy using the traditional definition was 44.3 %, whereas when both questions were considered, the rate was 41.6%. No significant differences in age, education, marital status, race/ethnicity, household income, and geographic area of residence for the possibly ambivalent women compared to the women who were clear about their intentions to not be pregnant were shown.

Conclusions: The intention to become pregnant is a difficult concept to measure precisely. Hawai'i PRAMS has chosen to define its population of women who had an unintended pregnancy by using both the traditional question and the contraception filter question. Women who were trying to get pregnant are placed in the intended pregnancy group regardless of how they responded to other questions.

Public Health Implications: It is important to have a stable and reliable measurement tool of pregnancy intendedness to learn the trend, to address the needs, and to direct scarce resources toward public health services that prevent unintended pregnancy.

ABSTRACTS

#LB 14 - Session D1

MEASURING DIMENSIONS OF WOMEN'S PREGNANCY INTENTIONS

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[2]Department of Community Health Sciences, Tulane University
[3]Department of International Health & Development, Tulane University

Background: Several qualitative studies have explored the socio-cultural relevance of planning and intending a pregnancy. A common theme that emerged in these studies is that planning a pregnancy is different than desiring a pregnancy. However, no study has attempted to measure desirability and relate it to the classical National Survey of Family Growth (NSFG) indicator of unintended pregnancy. This presentation introduces a New Orleans case study to quantify this pregnancy desirability construct.

Methods Data from in-depth interviews with 77 women, 14 to 38 years of age, recruited at public family planning and prenatal clinics in New Orleans were used to develop a series of 8 questions to measure women's pregnancy desirability.

The questions were then tested on a different sample from the same clinic populations. A total of 783 African-American women 13-24 years of age were used for the analysis. Factor analysis was used to examine latent constructs of the questions. ANOVA was used to assess bivariate associations between factor scores and pregnancy experience (never pregnant, currently pregnant with first pregnancy, had 1 pregnancy, had 2 or more pregnancies) and NSFG intention categories (intended, mistimed, unwanted).

Results: Qualitative data suggest that women value motherhood in different ways. For example, many women, both young and old, talked about how a pregnancy could bring more love, relationship stability, and adult status into their lives.

Factor analyses of the 8 questions used to capture pregnancy desirability suggest the presence of two latent constructs (Eigenvalues: 2.92 & 1.31; percent variance explained: 48.7 & 65.4). ANOVA analyses suggest a strong statistical association between the constructs and pregnancy experience ($P<0.001$). However, there was no statistical association between the constructs and the NSFG intention categories.

Conclusions: The NSFG intention categories do not reflect the desirability of pregnancies. However, pregnancy desirability is congruent with young women's childbearing behavior. Further studies are needed to identify dimensions of pregnancy intentions that are both congruent with young women's reported intentions and actual behavior.

Public health implications: Pregnancy desirability, which is typically not measured in surveys, should be considered as part of the social reality underlying young women's reported pregnancy intentions.

ABSTRACTS

#LB 15 - Session C2

SELF-REPORTED DENTAL UTILIZATION AND DENTAL PROBLEMS DURING PREGNANCY - ARKANSAS PRAMS, 2000

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Division of Oral Health, Centers for Disease Control and Prevention
Lynn Douglas Mouden, DDS, MPH, Gina Redford, BA, MAP
Arkansas Department of Health

Background: The American Academy of Periodontology (AAP) estimates that half of women experience pregnancy gingivitis. AAP suggests that women visit the dentist for a periodontal evaluation before pregnancy, and that during pregnancy women maintain their oral hygiene routine and not avoid visiting the dentist. We examined the prevalence of dental problems, dental visits, and receipt of oral heath education as reported by women responding to the 2000 Arkansas Pregnancy Risk Assessment and Monitoring Survey (PRAMS), which asks about a recent pregnancy resulting in a live birth.

Methods: PRAMS included three oral health questions (No/Yes): "I needed to see a dentist for a problem, I went to a dentist or dental clinic, a dental or other health care worker talked with me about how to care for my teeth and gums." We assessed associations between responses to these questions and demographic and behavioral characteristics, using unadjusted relative risks.

Results: Of the women responding to the oral health questions, approximately 33% reported needing to see a dentist, 71.3% did not seek dental care, and 77.9% did not recall being talked to about care of their teeth and gums. Among those reporting a dental problem, the following characteristics were associated with not going to a dentist: Medicaid (for prenatal care) (RR 1.35 CI 1.05-1.74), ages 20-24 (RR 1.59 CI 1.05-2.42), smoking 3 months prior to pregnancy (RR 1.45 CI 1.02-2.06), and unintended pregnancy (RR 1.28 CI 1.02-1.61).

Conclusions: The proportion of women who visited a dentist during pregnancy was low (29%) and even fewer respondents recalled receiving oral health education (22%). The prevalence of dental problems during pregnancy (33%) is likely underestimated as many people with dental problems are unaware of them. Medicaid, which provides few dental benefits for adults, is associated with non-utilization among women who reported a dental problem during pregnancy.

Public Health Implications: This study provides baseline estimates for Arkansas should they decide to extend Medicaid dental benefits to pregnant women.

ABSTRACTS

#LB 17 - Session E5

A DESCRIPTION OF WOMEN'S HEALTH AND PREGNANCY FACTORS AMONG AMERICAN INDIAN WOMEN: THE PONCA TRIBE OF OKLAHOMA

Tonji Durant, Ph.D.,[1] Elizabeth Primeaux,[2] Howard Goldberg, Ph.D.,[1] Modina Waters,[3] Gary Weeks,[1] and Myra Tucker,[1] MPH
[1]Division of Reproductive Health, Centers for Disease Control and Prevention, [2]Business Affairs Committee, Ponca Tribe, [3]Health Director, White Eagle Clinic, Ponca Tribe

Background: American Indian (AI) women and children experience high rates of pregnancy-related mortality and morbidity (e.g., 8.3 infant deaths per 1,000 live births). Although researchers have identified health practices and maternal behaviors associated with these outcomes, little is known about the prevalence of these pregnancy-related health behaviors among specific AI tribes. Results from these analyses could be used to develop more targeted interventions or to enhance current programs for reducing pregnancy-related mortality and morbidity.

Methods: Data from a 2002 survey of behavioral risk factors conducted among members of the Ponca Tribe, Oklahoma, were used to describe the prevalence of pap smears, pregnancy, breastfeeding, alcohol and tobacco use, and prenatal care (PNC). This is a face-to-face, household-based survey conducted by trained tribal members using a standardized questionnaire. A random sample of enrolled tribal members aged 18 and older was taken.

Results: A total of 482 interviews (41.5% male; 58.5% female) were completed. Most female respondents (n=282) reported having had a Pap smear (77.2%) within the past two years. Of women aged 18-44, 88% (n=156) reported ever being pregnant. Of those ever pregnant, 49.4% (n=77) reported a pregnancy within the past five years. Of these women, only 32.5% reported breastfeeding their last child. Approximately 12.3% reported drinking alcohol and 33.8% reported smoking cigarettes during the last pregnancy. However, all women reported having received PNC during their last pregnancy.

Conclusions: Although all women with a pregnancy in the past five years received some PNC, the prevalence of alcohol and tobacco use and not breastfeeding is considered high. Interventions for tobacco and alcohol use along with efforts to increase breastfeeding may be implemented at PNC visits.

Public Health Implications: A better understanding of the health behaviors during pregnancy of AI women, their characteristics, and their health education needs are important in developing effective interventions to reduce pregnancy-related mortality and morbidity among AIs.

ABSTRACTS

#LB 19 - Poster Session

EARLY WEANING AND PERINATAL CIGARETTE SMOKING: FINDINGS FROM THE 2000-01 OREGON PREGNANCY RISK ASSESSMENT MONITORING SYSTEM

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Background: Previous studies have found that maternal smoking is associated with decreased initiation and continuation of breastfeeding. However, it is not clear whether postpartum cigarette smoking has a stronger impact on early weaning than prenatal smoking.

Methods: Data from the 2000 and 2001 Oregon Pregnancy Risk Assessment Monitoring System (PRAMS) (72.6% response rate) were used. Based on self-reported smoking status during the first, second, and third trimesters of pregnancy and during the postpartum period, 3,215 women who had initiated breastfeeding were grouped into four categories: non-smokers, quitters (who stopped smoking during pregnancy and did not resume after delivery), relapsers (who stopped smoking during pregnancy but resumed smoking after delivery), and persistent smokers (who reported smoking throughout pregnancy and postpartum periods). Early weaning was defined as not breastfeeding at 10 weeks. Logistic regression models were used to adjust for confounders. Analysis was performed using SAS and SUDAAN.

Results: At 10 weeks after delivery, 71.1% of recent mothers who initiated breastfeeding still breastfed their infants. The percentages of early weaning were 24.3% for non-smokers, 31.6% for quitters, 54.5% for relapsers, and 59.0% for persistent smokers. After controlling for confounders, quitters and the relapsers who smoked less than 10 cigarettes daily in the postpartum period did not have significantly different odds of early weaning than non-smokers (OR for quitters: 1.08; 0.98, 1.20; OR for relapsers: 0.99; 0.90, 1.08). However, the relapsers who smoked 10 or more cigarettes a day were 7.1 times more likely to wean before 10 weeks (95% CI: 6.29, 8.01), compared to non-smokers. The odds of early weaning were significantly higher among persistent smokers: 1.61 times higher among those who smoked less than 10 cigarettes (95% CI: 1.41, 1.83) and 4.26 times higher among those who smoked 10 or more cigarettes daily (95% CI: 3.95, 4.59).

Conclusions: Results suggest that relapse of heavy smoking in the postpartum period is associated with significantly higher odds of early weaning. Postpartum smoking seems to be more important than prenatal smoking in early weaning.

Public health implications: Preventing smoking relapse during the postpartum period may increase the proportion of women who breastfeed their babies longer.

ABSTRACTS

#LB 20 - Poster Session

ESTIMATED COSTS ASSOCIATED WITH THE PROVISION OF MEDICAID PRENATAL CASE MANAGEMENT

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BACKGROUND: Empirical evidence suggests that Medicaid prenatal case management (PCM) and secondary PCM services can reduce the number of infants born with low birth weight (LBW). However, PCM program administrators have expressed concern that Medicaid does not fully reimburse PCM agency costs, thus threatening ongoing PCM program sustainability. Existing PCM cost analyses appear to underestimate costs to PCM agencies because costs are derived from the payer perspective, that of Medicaid. In addition, case managers (CM) provide PCM interventions regardless of reimbursement availability, several PCM interventions are not reimbursable, and fringe benefit costs, indirect costs, and secondary PCM costs are not included in existing costs analyses. The purpose of this study was to examine PCM costs from the agency's perspective and to examine the proportion of costs that are Medicaid reimbursable.

METHOD: Self-report surveys were used to collect data from case managers (n=40), PCM program managers (n=9), and secondary PCM providers (n=45). Costs to PCM agencies were calculated using the following variables: time CMs spent providing PCM interventions and activities, caseload size, and weeks cases were open. A sensitivity analysis was used to examine the effect of fringe benefits and indirect costs on agency costs. Costs to secondary PCM providers were calculated based on reported agency costs and the number of times that PCM clients used the service during their pregnancies.

RESULTS: Non-reimbursable interventions and activities account for 40.6% of PCM costs to agencies that provide PCM. Secondary PCM provider costs increased the percentage of non-reimbursed services to 81%. Fringe benefit costs and indirect costs can increase PCM agency costs by 57%.

CONCLUSIONS: These study results support the assertions: (1) existing cost analyses underestimate agency PCM costs, (2) CMs provide PCM interventions regardless of the availability of reimbursement, and (3) Medicaid does not reimburse a sizable proportion of PCM agency costs and secondary PCM costs.

PUBLIC HEALTH IMPLICATIONS: Infant LBW can be prevented through PCM interventions and secondary PCM services. To promote PCM program sustainability, policy and program changes are needed to address the discrepancy between actual PCM costs and the PCM costs that are reimbursed by Medicaid.

ABSTRACTS

#LB 22 - Session A6

CARE COORDINATION AND SPECIAL NEEDS CHILDREN: RESULTS FROM THE NATIONAL SURVEY

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Background: Children with special health care needs (CSHCN) have or are at increased risk for chronic physical, developmental, behavioral, or emotional conditions and also require health and related services of a type or amount beyond that required by children generally. They require a variety of health related services, depending on the severity of the condition. Care coordination is recommended to help families of CSHCN optimize their child's health by ensuring that they are able to access a comprehensive arena of services, avoid duplication of services, and minimize costs. This study sought to identify factors associated with knowledge about and use of care coordination among families with CSHCN in New Mexico, as well as the efficacy of such services.

Methods: Using the National Survey of CSHCN, the New Mexico data were analyzed to determine a relationship between families who needed and/or received care coordination and related factors such as medical home, transition care, insurance, and financial impact on family. Point estimates and p-values for the weighted data were obtained using Pearson's chi-square test. Consultations to interpret findings were held with the CSHCN staff. Study limitations were associated with data collection and coding by federal sponsors (federal poverty level guidelines for Medicaid, under-representation by race- ethnicity, and others).

Results: Only 14.7% [95%CI: 11.15,19.15] of families of CSHCN said they needed professional care coordination. Of these, 84.65%[95% CI: 71.95,92.22] said they received all the professional care coordination they needed. Care coordination was significantly related to insurance coverage, the need for additional income, feeling like a partner in care, and satisfaction with health care providers. An estimated 93.84% [95%CI: 84.34-97.73] of families who felt like a partner in their child's care were receiving care coordination, as opposed to 58% [95%CI: 29.27-82.15] who were not so engaged. Uninsured families did not receive care coordination, and all of the families receiving respite care were also receiving care coordination. Over 97% [95% CI: 82.17,99.68] of families that were satisfied with the communication between their health care providers were receiving care coordination, and the amount of time spent was a critical factor.

Conclusions: Care coordination is effective in accomplishing its purposes of reducing costs and improving access to services. Many families do not think that they need care coordination or do not take advantage of it because of their confusion with the health care system and lack of knowledge about insurance and availability of services. Time that the primary care provider and care coordinator spend with the family providing advice and culturally competent care is crucial in encouraging families to use care coordination to their fullest benefit.

Public Health Implications: Insurance companies and managed care providers in New Mexico need to better advertise care coordination services. Issues concerning the time spent with families and cultural competency should be addressed with the payers and providers of care. Educating primary care providers to refer families for care coordination, and a social-marketing campaign to improve name recognition of the Title V program in New Mexico will also help more families reap the benefits of care coordination.

ABSTRACTS

#LB 23 - Session E4

DENTAL CARE AND CHILDREN WITH SPECIAL HEALTH CARE NEEDS: RESULTS FROM THE NATIONAL SURVEY

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Background: Oral health disease is of great concern for children with special health care needs(CSHCN). Some CSHCN are born with oral diseases, such as cleft lip or palate, and many CSHCN are at increased risk of developing oral health problems, because of the nature of their conditions, shortage of pediatric dentists, and their reliance on family members for the provision of everyday dental care. To further complicate matters, CSHCN often require a coordinated treatment approach (orthodontia, speech and hearing therapy, mental health counseling), making it difficult for families to remain committed. This study examined the perceived need for dental care among families of CSHCN, and the issues of access and barriers to care that influenced whether families received all the dental care they needed.

Methods: Using the National Survey of Children with Special Health Care Needs, New Mexico data were analyzed to determine a relationship between families who needed and/or received dental care and related factors such as insurance, financial impact on family, and severity of affliction. Point estimates and p-values for the weighted data were obtained using Pearson's chi-square test. Consultations to interpret the findings were held with the CSHCN staff including its pediatric dentist specialist. Study limitations were associated with data collection and coding by federal sponsors. (federal poverty levels for Medicaid, under representation by race-ethnicity, and others).

Results: An estimated 75% [95% CI: 70.05,79.13] of families of CSHCN reported needing dental care for their child in the past 12 months, of whom 85% [95% CI: 79.56,88.87] received all the dental care they needed. Perceived need for dental care was significantly associated with insurance coverage and a relationship with the primary care provider. An estimated 86.18% [95% CI: 80.82,90.22] of CSHCN with insurance said they needed dental care in the past 12 months, and over 1/3 [33.25%; 95%CI: 15.92,56.71] of families of CSHCN who were uninsured said they did not need dental care. Not receiving dental care was significantly associated with insurance coverage, perceived financial status, the severity of the child's condition, and missed school days. Also, 90.86% [95% CI: 83.18,95.23] whose child's needs were not severe were receiving dental care, whereas 21.75%[15.43,29.76] whose condition was considered severe were not receiving dental care.

Conclusions: Improving dental care for CSHCN needs several approaches: targeted education about the importance of seeking dental care from providers and payers of care. Socioeconomic status, severity of the child's condition, and financial difficulties are among the reasons that families don't receive care. Too few dentists are trained in pediatrics/CSHCN and severity of a child's condition precludes them from getting dental care. Medicaid's low reimbursement rates and added hassle of paperwork further reduce the pool of dentists that families can access.

Public Health Implications: New Mexico needs to recruit and retain more pediatric dentists, and increase the reimbursement rates by Medicaid/private carriers so CSHCN may receive meaningful care. Primary care providers must be trained in educating their patients about oral health, and the community must begin a social marketing campaign about the importance of dental care.

ABSTRACTS

#LB 24 - Poster Session

INSURANCE STATUS AS A BARRIER TO EARLY ENTRY INTO PRENATAL CARE IN HAWAIʻI.

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Background: Early initiation of prenatal care (PNC) is vital to improving pregnancy outcomes. Women who receive late entry into PNC (after the first 12 weeks of pregnancy) or no PNC are at greater risk of developing undetected complications of pregnancy. This study examines whether insurance status is a significant barrier to women accessing first trimester PNC in Hawai'i.

Methods: We used data from Hawai'i's Pregnancy Risk Assessment Monitoring System (PRAMS) for women who gave birth in 2000 and 2001. We analyzed month of first PNC visit for women who had and did not have insurance prior to pregnancy using SUDAAN for weighting and Chi-square tests for significance. We also adjusted for education, age, place of residence, marital status and race to assess the independent effects of maternal socio-demographic variables on PNC entry.

Results: Of the 6,251 women who were surveyed 5,009 (80%) responded. In Hawai'i, 11.5% of women do not have insurance prior to pregnancy. The percentage of women with insurance with PNC entry in the first three months of pregnancy was 32%, 41%, and 15% respectively compared to 20%, 31%, and 19% for women without insurance ($p < 0.001$). An estimated 19% of all PRAMS respondents stated that they did not get PNC as early as they wanted. The three barriers reported most often were: "not knowing if pregnant or wanted an abortion" (45%), "lack of insurance" (19%), and "No early appointment" (19%). Needing transportation, being too busy, not having childcare available, and other miscellaneous barriers were reported less frequently.

Conclusion: In Hawai'i, women without insurance significantly delay their month of entry into PNC even when adjusting for other socio-demographic factors. Lack of early recognition of pregnancy is also a major barrier to early entry into PNC.

Public Health Implications: Understanding the barriers to early entry in PNC is important for promoting PNC and essential in targeting effective intervention. These findings can be used to develop programs and policies to better meet the needs of women.

ABSTRACTS

#LB 26 - Session D1

TIMING OF MARRIAGE AND CHILDBEARING IN A POPULATION AT RISK FOR UNINTENDED PREGNANCIES

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Background: Research indicates that notions of attaining financial stability prior to marriage and pregnancy exist as an ideal in many populations; however, these ideals are often not met among those at high-risk of unintended pregnancies. This study explored how women at high-risk for unintended pregnancies perceived timing and control of marriage and childbearing intentions.

Methods: Qualitative data was obtained from 76 in-depth interviews with women from inner-city public prenatal and family planning clinics as part of The Determinants of Unintended Pregnancy Risk Study in New Orleans. EZ-Text software was used to analyze responses to a hypothetical scenario included in the rapid assessment guides used in the study that presented a 16-year old girl who finds herself unexpectedly pregnant. Relationship dynamics, reasons to marry or not marry, and desirability of pregnancy were explored in the scenario.

Results: Responding to the scenario, more than half of respondents felt that the girl should stay with her partner, but marriage was not essential. The most common reason for this response was that the couple should be "established" before marrying. "Established" refers to completion of school, financial stability, and/or ownership of a home. When talking about their own relationships, similar perspectives about the need to be "established" before marriage and childbearing were also expressed by the majority of unmarried respondents. Analysis presented a disconnect between the ideal timing of marriage and childbearing for the women interviewed.

Conclusions: Although there are notions in our sample that marriage and childbearing are linked, in reality these two events have been separated. The preference to be established before marriage may be one reason why women postpone marriage, but not childbearing, and the majority of our unmarried respondents already have a child or are currently pregnant. To most respondents, becoming established before marriage is still possible.

Public Health Implications: An in-depth understanding of attitudes and perceptions about relationship
dynamics, marriage, and childbearing intentions among women at high-risk of unintended pregnancies will help develop effective strategies that empower women to have control over the timing of their marriage and childbearing decisions. The concept of "established" may be useful in designing strategies and programs to prevent unintended pregnancy.

ABSTRACTS

#LB 27 - Poster Session

THE PSYCHOLOGICAL SEQUELAE OF CHILDHOOD FORCED SEX: A STUDY OF MATERNAL MENTAL HEALTH IN PREGNANT AND POSTPARTUM ADOLESCENT MOTHERS

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Background: Childhood forced sexual intercourse (CFS) is a significant public health problem due to the violent nature of the crime, the developmental consequences it has for children and young adults, and the physical and mental health impact it has on survivors. Few studies have examined the long-term impact CFS has on the mental health status of women during pregnancy and the postpartum period. The objective of this study was to determine whether pregnant adolescents who had experienced CFS were at increased risk for clinical depression and anxiety during pregnancy and the postpartum period.

Methods: The present study was a secondary analysis of data obtained from a community sample of women enrolled in a longitudinal cohort study of pregnant adolescents (n = 231). Logistic regression was used to determine whether respondents who reported CFS had a greater likelihood of being clinically depressed or anxious during pregnancy through 18 months postpartum.

Results: A third of the sample (32%) reported at least one incident of CFS, which exceeds national prevalence estimates of CFS in the general population. Respondents who had experienced CFS were significantly more likely to be clinically depressed or anxious during pregnancy (O.R.=2.2; 1.2-4.0) and at 18 months postpartum (O.R.=3.0; 1.4-6.5). Mothers who had their first CFS experience after age 15 were at highest risk for clinical depression or anxiety during pregnancy (O.R.= 2.4; 1.2-4.7) and at 18 months postpartum (O.R.=3.7; 1.6-8.4). Respondents who reported CFS were more likely to report a previous teen pregnancy (O.R.=2.1; 1.2-2.9).

Conclusions: Those who reported CFS were at greater risk for clinical depression or anxiety during pregnancy and at 18 months postpartum, and more likely to have had a prior teen pregnancy, both of which are risk factors for poor maternal and child health outcomes. Pregnant adolescents had a greater likelihood of having a CFS experience than their non-pregnant peers and women in the general population.

Public Health Implications: The findings from this study demonstrate the need for pregnancy prevention efforts focusing on adolescents who have experienced CFS, as well as screenings and mental health services for adolescent mothers during pregnancy and the postpartum period.

ABSTRACTS

#LB 29 - Session B3

USING PRAMS DATA TO EVALUATE FOLIC ACID KNOWLEDGE AND MULTIVITAMIN USAGE OF WOMEN OF CHILDBEARING AGE IN ALABAMA

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Background: Research has shown that an adequate intake of folic acid before conception may reduce the risk of neural tube defects by as much as 70%. In 1999, Alabama PRAMS data showed that 79.5% of women had knowledge of folic acid and its importance in healthy babies. PRAMS seeks to show if the knowledge of folic acid by these women was translated into a positive behavior pattern of regular multivitamin usage before a pregnancy occurred.

Method: 2001 Alabama PRAMS data are used to identify several population groups for this study. The populations are: 1- percent of mothers, by age group, who were trying to become pregnant, 2- the percent of mothers, by age group, who consumed a multivitamin before pregnancy and how many times a week they took it, 3- the percent of mothers who were on Medicaid before they became pregnant, 4- the percent of mothers who were on another insurance before their pregnancy.

Results: In 2001, 24,115 women recorded that they were trying to become pregnant. Of that number, 48.7% took no multivitamins at all in the month before they became pregnant. Only 37%
recorded taking a vitamin everyday. Among the different age groups, mothers 19 years and younger, even though they were trying to be pregnant, consumed the least amount
of vitamins with only 6.2% taking them daily. Mothers in the 30 years and greater group recorded
a 42.7% rate for daily consumption. Medicaid participation before pregnancy was not a positive factor as only 15.6% of mothers consumed vitamins daily, whereas the rate improved to 30.5% for women covered by other insurance types.

Conclusion: Whereas almost 80% of mothers had knowledge of folic acid in 1999, this knowledge did not translate into healthy preparations for future pregnancies.

Public Health Implications: Constant reinforcement by all public health organizations of the benefits of taking adequate amounts of folic acid by women of childbearing age is critical.

ABSTRACTS

#LB 30 - Session A3

EMERGENCY DEPARTMENTS AS A SOURCE OF CARE FOR LATINO CHILDREN IN A BORDER COMMUNITY

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Background: We analyze the use of the emergency department for primary care by Latino children in a rural Arizona-Mexico border county utilizing a unique database (the Yuma Community Health Data System) that includes health care and insurance coverage data from a wide variety of insurers and providers on more than 30,000 children.

Methods: Logistic models that relate emergency department use to demographics, insurance status, location and access to primary care were estimated for more than twenty thousand children. Visits for truly emergency conditions (e.g., poisonings, trauma) were excluded.

Results: Uninsured children were more than five times as likely (OR=5.47, $p<0.001$), all else equal, to utilize the emergency department than children with insurance coverage. Controlling for insurance coverage, Latino children are no more likely to use the emergency department for primary care than children in other ethnic groups.

Conclusions: The results suggest that findings of above average use of the emergency department by Latino children reflect a failure to adequately control for insurance coverage rather than attitudes or practices peculiar to Latino children.

Public Health Implications: One way to decrease dependence on the emergency room may be to develop culturally appropriate programs that link Latino children to available insurance programs.

ABSTRACTS

#LB 32 - Session D1

CONTRACEPTIVE PRACTICES IN THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS), 2002

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Background: Contraceptive use is an important preventive factor for unintended pregnancy (UIP). In the United States, almost 50% of pregnancies are unintended. Of those women reporting an UIP, 47% indicated not using a contraceptive method one month prior to becoming pregnant.

Methods: Analyses were conducted using the 2002 BRFSS, a population based survey with random digit dialing methodology. Approximately 59,000 women and 70,000 men from 50 states and 4 territories were included in these analyses. Male and female estimates of contraceptive use were obtained. Risk factors for contraceptive use were described using logistic regression.

Results: In 2002, 69% of all reproductive aged women and 61% of reproductive aged men reported currently using a contraceptive method. The most frequently reported methods of birth control for both men and women were sterilization, the pill, and condoms. Marital status and race/ethnicity were associated with not using a contraceptive method for both men and women in preliminary results. The odds ratios (OR) and confidence intervals (CI) for single women (OR=3.6, CI=3.2,3.9) and men (OR=3.0, CI=2.8,3.3) indicated that they were more likely to not use a birth control method compared to married individuals. Separated, divorced or widowed women (OR=2.9, CI=2.6,3.2) and men (OR=2.6, CI=2.4,2.8) were more likely to be non-users than married individuals. Asian/PI women (OR=1.6, CI=1.3,2.1) and men (OR=1.4, CI=1.1,16) were more likely to be non-users compared to white women and men. Health care coverage was also associated with contraceptive use among women. Age, income, physical activity, and education were also associated with contraceptive use among men.

Conclusions: Over half of reproductive aged men and women report contraceptive use. Significant associations with not using a birth control method were found for some demographic characteristics. Developing a better understanding of contraceptive practices for all population groups is important in reducing the occurrence of UIPs.

Public Health Implications: Public health programs should focus on understanding characteristics and reasons for not using contraceptive methods and develop ways to increase contraceptive use.

ABSTRACTS

#LB 33 - Poster Session

TUBERCULIN SENSITIVITY IN APPARENTLY HEALTHY RURAL SOUTH INDIAN SCHOOLCHILDREN

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BACKGROUND: Tuberculosis, in spite of aggressive control measures and treatment regimes continue to have high rates of morbidity and mortality in developing countries. The objective of this study was to estimate the prevalence of tubercular infection in rural school children in South India.

METHODS: 418 school children (221 M + 197 F) in the age group of 5 years to 10 years, excluding known cases of tuberculosis were administered 1 tuberculin unit of purified protein derivative (PPD RT 23 Tween 80) by Mantoux method. Demographic details, anthropometric indices and presence of BCG scar were recorded. Results were read after 72 hours. Statistical analysis was done using EPI INFO software.

RESULTS: 59% children showed one scar of previous BCG vaccination. Males had high vaccination rates than females ($p < 0.001$). 9.72% of vaccinated children and 23.98% of unvaccinated children were positive reactors (defined as >10 mm in unvaccinated children and >15 mm in vaccinated children). Prevalence of tubercular infection was 15.5%. Tuberculin positivity rate in unvaccinated children (23.98%) was higher ($p< 0.001$) than in the vaccinated (9.72%). Tuberculin negativity rate was lower ($p< 0.001$) in vaccinated (90.28) as compared to the unvaccinated (76.02%). Malnutrition was found in 66.26% of children.

CONCLUSIONS: Prevalence of tubercular infection is high as compared to recent studies. Though higher than the national average of 42%, vaccination rate of 59% is lower than the regional average of 79.7%.

PUBLIC HEALTH IMPLICATIONS: The results call for more effective strategies for vaccination coverage at the rural community level. BCG vaccination is proved to offer definite protection against tubercular infection. It is recommended, based on this study that paediatric population be made a priority under the Revised National Tuberculosis Control Programme (RNTCP) and paediatric dose packages of anti tubercular drugs be made available under the same. Mantoux reagent should be made available at the grass root level for the early detection, referral and treatment of paediatric tuberculosis.

ABSTRACTS

#LB 35 - Poster Session

RISK OF MALFORMATIONS ASSOCIATED WITH RESIDENTIAL PROXIMITY TO HAZARDOUS WASTE SITES IN WASHINGTON STATE

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Background: Hazardous waste sites may contain substances harmful to fetal development. Maternal residential proximity to hazardous waste sites or landfills has been associated with adverse pregnancy outcomes.

Methods: Using linked birth, hospital discharge and hazardous sites data for Washington State, we evaluated the association between malformation occurrence among offspring and maternal residential proximity to hazardous waste sites. Cases (N = 63,006) were all infants born 1987–2001 with malformations (ICD-9 740.0 – 759.9 on hospital record, or birth certificate check-box). Controls (N = 315,030) were randomly selected infants without malformations born during the same years. The straight-line distance between birth residence and nearest hazardous waste site was measured using mapping software. Risk of malformation was measured using logistic regression (adjusted for maternal age, marital status, smoking, and indicators of socio-economic status and population density).

Results: The risk of having a malformed infant increased with decreasing distance from a hazardous waste site. Relative to birth residences >5 miles from a site, living between 2-5 miles of a hazardous waste site had an Odds Ratio (OR) of 1.33 (1.27, 1.41). Living within .5 miles of a site had an OR of 1.56 (1.48, 1.64). When specific malformation types were examined separately, increased risks were observed for all except CNS, GI, and chromosomal anomalies, with greatest risk noted for skin malformations (OR 2.62, 2.35-2.92). Results were similar when proximity to higher risk sites was examined. Close proximity to lower risk sites was associated with decreased risk.

Conclusions: Risk of malformation and specific malformation types is increased with close proximity to a hazardous waste site. Further analyses examining distance to sites containing specific chemicals or media are warranted.

Public Health Implications: Maternal residential proximity to hazardous waste during pregnancy may significantly increase risk of malformation in offspring. Recognition of this risk and increased awareness of potential pathways of exposure could lead to prevention efforts.

ABSTRACTS

#LB 37 - Poster Session

INFANT MORTALITY (IM) RISK FACTOR AND TREND ANALYSIS IN LOUISIANA

Genet Burka, MSW, MPH

Background: Despite overall improvement in IM rates, Louisiana ranks 45th among the U.S. states in 2001. In addition, the state's large disparity in IM rates between blacks and whites persists. This analysis examines the state's IM from 1992 to2002.

Method: For our study, we used the state's linked birth and infant death certificates files for 1992-2002. The analysis was restricted to live births of LA resident mothers with birth weight >= 500 grams and gestational age >= 24 weeks. Stratified analysis was performed to study potential risk factors and confounders.

Results: The average annual decline in the IM rate from 1992 to 2001 was 1.7% for whites (95% confidence interval [CI]: 0, 3.4) and 1.5% for blacks (CI: 0.2, 2.7) . The black IM rates were persistently twice the white IM rates throughout the 10-year period, with no significant decrease in black/white ratio. From 1998-2002, IM rates were higher among infants who were male, preterm (<37 weeks gestation), and very low birth weight (VLBW). Infants of women with less than high school education also had higher IM rates. The proportion of black infants born low birth weight (LBW, < 2500 grams) was 10.7%, and preterm (<37 weeks of GA) was 11.4%. These rates were higher than those of white infants (4.7% and 6% respectively). The probability of death for VLBW and LBW white infants was higher than black infants (VLBW: OR =1.9, CI 1.6-2.2; LBW: OR = 1.5, CI 1.1-1.9). In contrast, the probability of death for normal birth weight infants (= 2500 grams) was higher (OR 1.5, CI 1.2-1.8) for black infants than white infants.

Conclusion: Factors such as birth weight, gestational age, maternal education, gender and race were associated with high IM rates and the relative difference between black and white persists with no improvement.

Public Health Implication: The state must focus on specific IM risk factors in order to reduce IM. To reduce the black-white gap in IM, potential interventions targeting the black population need to be developed and evaluated.

ABSTRACTS

#LB 38 - Session E5

HEPATITIS C VERTICAL TRANSMISSION RATES AMONG THE NATIVE AMERICAN POPULATION OF THE NORTHERN PLAINS TRIBES

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Background: Hepatitis C is the most common blood-borne infection in the United States. Of the estimated 4 million Americans infected, over 5,000 cases of Hepatitis C have been diagnosed among Native American and Alaskan Native peoples, a vast underestimate of the true number of cases. Liver disease is the 5th leading cause of death among Native Americans, (10th for all U.S. adults). Current estimates of vertical transmission rates in the general US population are at 5-6%. Our study indicates the rates among Native Americans of the northern plains are significantly higher.

Methods: Cases of Hepatitis C were identified from IHS facilities in North Dakota, South Dakota and Nebraska utilizing a Q-man query of the Indian Health Service's RPMS, (Resource and Patient Management System). The time period used for the survey was 1/1/1990 to 12/31/2002. The RPMS Q-man query initially identified 537 patients. Individual chart reviews were conducted, from which a final cohort of 462 patients met diagnostic criteria. The charts were reviewed for demographic, clinical, risk behaviors, laboratory and treatment data, which was entered into CDC's Epi 2002 software program for analysis.

Results: Of the 462 patients identified and surveyed, 10 females were infected with Hepatitis C during their pregnancy. Three (30%) of the infants born of 3 of the 10 known infected mothers were themselves infected with Hepatitis C virus as confirmed by HCV PCR. A follow up study to determine the status of the remaining 7 children is in progress.

Conclusions: Within this small study cohort, a minimum rate of vertical transmission of Hepatitis C was 30% and it is entirely possible the rate could be significantly higher pending results of the follow-up study of the remaining seven children. Current or previous high risk lifestyles of the mothers coupled with high viral loads during gestation may be factors worthy of additional study within this population

Public Health Implications: Already a known and feared public health concern nationally, the presence of this disease within the Native American populations poses a significant threat.

ABSTRACTS

#LB 39 - Session E5

FETAL GROWTH IN THE NATIVE AMERICAN/ALASKAN NATIVE POPULATION

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Background: It has been shown that fetal growth differs among specific populations. Nevertheless, the use of population-specific standards to guide clinical and public health actions seldom occurs. For some populations, standards have not been obtained. This study describes the fetal growth curves for US Native American/Alaskan Native (NA/AN) populations and compares them to the 1994-1996 U.S. reference.

Methods: The study analyzed 1990-1999 birth data (NCHS) for NA/AN singletons with gestational age (GA) ≥ 22 weeks, mothers' ages 15-35 years, no fetal, maternal, placental, or delivery complications. The 10th, 50th, and 90th percentiles for the birth weights were calculated from 22–44 weeks, after correction for implausible birth weights for GA combinations, using the criteria published by Alexander et al. After exclusions, there were 329,571 NA/AN live births. NA/AN birth weights by percentile and by US region were compared to reference standards.

Results: The. The Midwest had 68,177 live births. Using the NA/AN birth weight percentiles 9.2% (95%Confidence Interval [CI], 9.0-9.4) were classified as SGA compared to 8.2% (CI 8.0-8.4) when using the US 1994-1996 reference (USR). The Northeast had 17,011 live births, using NA/AN birthweight percentiles 13.7% (CI 13.2-14.2) were classified as SGA compared to 12.6% (CI 12.1-13.0) when using the USR. There were 86,365 live births in the South, using NA/AN birthweight percentiles 11.1% (CI 10.9-11.3) were classified as SGA compared to 10.0% (CI 9.8-10.2) when using the USR. The Western region had the largest number of live births with 204,588; using NA/AN birthweight percentiles 10.3% (CI 10.2-10.4) were classified as SGA compared to 9.3% (CI 9.1- 9.3) when using the USR.

Conclusions: Specific population standards for birth weight should be used to diagnose fetal growth problems. Genetic determinants for fetal size, growth, and birth weight are different among populations. Using the USR, some NA/AI newborns were under diagnosed for SGA.

Public health implications: Under or over estimation of birth weight problems produced by use of improper standards may have clinical implications (diagnostic bias) leading to under or over intervention, or could produce wrongful public health program and policy estimations for public health actions.

ABSTRACTS

#LB 40 - Poster Session

THE EFFECTS OF A SKILL-BASED INTERVENTION PROMOTING CONSISTENT AND CORRECT USE OF THE MALE CONDOM AMONG HIGH-RISK WOMEN

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Background: Sexually transmitted diseases (STD) are a major public health problem in the United States, especially among women. Infections with *Chlamydia trachomatis and Neisseria gonorroheoea* are common STDs that can cause long-term sequelae, such as pelvic inflammatory disease (PID), ectopic pregnancy, infertility, and adverse pregnancy complications. In addition to abstinence and having a mutually monogamous relationship with a non-infected partner, consistent and correct condom use can also effectively reduce the risk of infection among individuals whose behaviors place them at risk. We conducted a randomized controlled trial to examine the effectiveness of a skill-based intervention in increasing condom use among high-risk women attending STD clinics in Birmingham, AL.

Methods: The intervention was designed to enhance perceived risk, knowledge, and skills (condom use, partner communication/negotiation). Its effect was evaluated as the attributable increase (AI) in condom use (%) among the intervention group compared to the control group (i.e., AI= $100*(R_I-R_c)/R_c$) (R= Rate of condom use). Binomial regression using the generalized estimating equation (GEE) model evaluated multiple predictors of condom use accounting for repeated measures.

Results: Whereas condom use increased overall in the intervention group (AI: 41%), the effect varied in subgroups of participants. The AI was higher among women aged ≤ 20 years (52%) than among women aged >30 years (40%); higher among women who had a tubal ligation (112%) than among oral contraceptive and barrier method users (39% and 17%, respectively); higher among women who had 10+ lifetime sex partners (46%) than among women who had 1-4 (31%); higher among women who had ever had gonorrhea or syphilis (46%) than among women who had never had STDs (32%); higher among women aged ≤ 14 years at first intercourse (44%) than among women aged ≥ 20 years at first intercourse (-55%); higher among women who were previously married [separated, divorced, or widowed] (79%) than among single women (29%).

Conclusion: The intervention group used condoms more frequent than the control group. Demographic, reproductive, and behavioral characteristics can influence the effect of interventions promoting condom use.

Public Health Implications: Intervention design may need to be tailored to specific subpopulations to maximize effectiveness.

ABSTRACTS

#LB 41 - Poster Session

REPEAT BIRTHS BORN TO TEENAGE MOTHERS - A RISK FOR INFANT MORTALITY

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Background: The adverse pregnancy outcomes, infant mortality rates and socioeconomic consequences of births to teenage mothers are well recognized. The purpose of this study was to examine the impact in infant mortality of repeat births born to teenage mothers (18-19 years old).

Methods: 1997-2001 Michigan birth-death linked data for infants born to Black and White women (18 through 19 years) was used to calculate the infant mortality rate (IMR), neonatal mortality rate and post-neonatal mortality rate. Repeat births were defined by the information of previous live births on birth certificates. Logistic regression was used to estimate odds ratios for infant deaths adjusting of race, gestational age, birth weight, prenatal care adequacy, type of insurance, smoking and alcohol drinking during pregnancy.

Results: During the 5-year period, 26.7% of a total of 48,260 infants born to teenage women were repeat births. The IMR for infants to teenage mothers was 11.5 per thousand infants . However, IMR for repeat births was 17.0, compared to 9.4 for first births. The neonatal mortality rate and postneonatal mortality rate were 9.0 and 8.1 for repeat births, 6.1 and 3.3 for first births, respectively. After adjusting for potential confounders, repeat births had a significantly higher postneonatal mortality rate than first births to teenage mothers (OR=1.9, 95% CI: 1.4 - 2.5).

Conclusion: Repeat birth to teenage mothers from 18 to 19 years of age is a significant risk factor to lead to higher postneonatal mortality rate.

Public Health Implications: Our findings support the necessity of the teenage pregnancy prevention programs. Public health programs offered to teenage mothers should also focused on infant health and infant care, especially for those who already had infants.

ABSTRACTS

#LB 42 - Session C3

MATERNAL MORBIDITY AND ITS IMPACT ON PRETERM BIRTHS – GEORGIA'S EXPERIENCE

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Background: Some of the most powerful influences on pregnancy outcomes are related to women's health status. Although maternal morbidity is a public health problem that affects nearly 1, 7 million women in the U.S. their impact on pregnancy outcomes is important to understand when developing statewide prevention strategies.

Methods: 2001 Medicaid hospital claims data reporting pregnancy delivery codes linked to birth certificates were used to estimate morbidity. We selected Medicaid claims data because of the population's high-risk nature and state priorities All reported diagnostics (ICD9 codes) were captured in 116 groupings. Appropriate groupings were divided in two major categories: nonpregnancy-related health conditions and pregnancy-related health conditions. Logistic regression analysis was used to estimates the odds ratio (OR) for preterm births (<37 weeks) adjusting for maternal age and maternal race.

Results: After adjusting for potential confounders, diabetes mellitus was the nonpregnancy-related condition having the largest impact on preterm delivery (OR=2.64; 95% CI: 2.14-3.23) followed by cardiac diseases (OR=1.42; 95%CI: 1.13-1.78). Severe pre-eclampsia was the pregnancy-related condition having the largest impact (OR=10.80; 95%CI: 9.04-12.9) followed by abruptio placentae (OR=6.49; 95%CI: 5.52-7.74).

Conclusions: Both pregnancy-related and nonpregnancy-related health conditions of the mother impacted preterm delivery. The findings highlight the importance of including the biological and medical problems in the "multiple determinants" model along with social, behavioral, psychological and environmental factors. Developing a prevention framework that shows the interrelationships of these factors and their influence on women's health across their life span is important to improving both women's health and pregnancy outcomes.

Public Health Implications: Maternal morbidity is difficult to measure and it still has many unknowns. Therefore, it is very important to conduct further epidemiological analysis to better understand the impact of morbidity on pregnancy outcomes and identify potential prevention strategies. The findings can be used to collaborate with health care providers to develop a life span approach to women's health.

Key words: maternal morbidity, Medicaid claim data, nonpregnancy-related and pregnancy-related health conditions

ABSTRACTS

#LB 43 - Session A6

DEVELOPMENT OF THE COLORADO CHILD HEALTH SURVEY

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Background: Many existing population-based surveys that collect data regarding health status and risk behaviors during different times in life. The pregnancy risk assessment monitoring system (PRAMS) is targeted at new mothers to understand the issues related to preconception, pregnancy and postpartum times in life. The Youth Risk Behavior Survey (YRBS) and other adolescent surveys collect information from teenagers. The Behavioral Risk Factor Surveillance System (BRFSS) targets adults. Children are the only population for which there is currently no state level data collected. This data gap could be closed with the Colorado Child Health Survey.

Methods: A literature review was conducted to assess appropriate topic areas and questions for the child health survey. A draft survey was developed that included questions from National, State and other countries surveys. Interested parties from the Health Department, local Universities and other children's advocates were invited to learn about the survey, come up with a target age group and devise a scheme to fund the effort. To reach parents of young children, a random digit dialing telephone survey method is used. The BRFSS currently employs this method and once a respondent has completed the BRFSS, the interviewer inquires as to if they have a child in the target age range and their willingness to complete the child health survey.

Results: It was decided that the survey would target parents of 1-14 year olds and each interested party would pay for the questions that they wanted on the survey. The survey currently has 124 questions. The survey was piloted in July of 2003. Marketing and financing of the survey, and preliminary results will be discussed.

Conclusions: Further refinement of some questions is needed, but the process is working well. A few respondents commented that the survey was a good idea and they were glad the health department was doing it.

Public Health Implications: For the first time in Colorado, data will be available on health behaviors of 1-14 year olds, and this will allow for more adequate surveillance and will help inform program planning and evaluation. Over time, county level estimates will also be available.

ABSTRACTS

#LB 44 - Session D4

INCREASING INFANT MORTALITY RATES (IMR) IN LOUISIANA: PUBLC HEALTH EMERGENCY OR REPORTING ARTIFACT?

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Background: Louisiana ranks consistently among the five states with the highest IMR, with a declining trend similar to that of the U.S. In 2000, the state's IMR hit a record low: 8.9. deaths per 1000 live births. Subsequently, the state's IMR has increased for two consecutive years: 9.8 in 2001 and 10.2 in 2002.

Methods: We analyzed LA's birth, infant, and fetal death certificate data from 1997-2002. One-sided Kendall's Tau-b correlation was used to evaluate statistical significance of trends.

Results: The absolute increase in the state's IMR from 2000 to 2002 was 7.1% for all races, 9.1% for whites, and 6.6% for blacks. These increasing IMR trends were statistically significant. Cause-specific mortality did not change. Neonatal IMR increased the most (10.3%). When calculating birth-weight specific IMRs, a large inconsistency was found in the <500 gm group. The group's IMRs for 1997 to 2002 were 699, 738, 697, 538, 710, and 826 per 1000 live births < 500 gms respectively. The average US IMR for the same group and period (870 per 1000 live births < 500 gms) were used to calculated the estimated proportion of underreported deaths. The estimated minimum underreporting for the <500gm group varied between 4.1% and 38.1%. For 2000, the state's lowest IMR had the largest discrepancy. The increasing trend in state's IMRs, for the last two years were not statistically significant (p 0.09) after adjustment.

Conclusion: Underreporting of infant deaths, specifically in the <500 gm group, may account for large variation in a state's IMR as presented here. IMR should be studied carefully and potentially include adjustments. Adjustment of rates and subgroup analyses should become a customary consideration when using rates for public health programs.

Public Health Implications: Many public health decisions are based on reported rates and changing it's impact on data and programs after the rate is reported retrospectively can be difficult, even if errors are found. We describe a simple systematic methodology to decrease the level of potential error in the analysis of IMR based on vital records.

ABSTRACTS

#LB 45 - Poster Session

COLORADO HOSPITAL PRACTICES AND POLICIES THAT SUPPORT BREASTFEEDING

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Background: Hospital maternity care practices supportive of breastfeeding positively impact breastfeeding rates. The UNICEF/WHO Baby Friendly Hospital Initiative recognizes hospitals that implement "Ten Steps to Successful Breastfeeding," facilitating the establishment of environments that encourage breastfeeding. No hospitals in Colorado have been designated as "Baby Friendly." This study assesses the degree to which Colorado hospitals implement specific practices and policies that promote and support breastfeeding.

Methods: A survey to assess hospital practices and policies related to breastfeeding was developed, building on those implemented in other states. It was administered by mail to all Colorado hospitals reporting live births in 2000 (n=55). CDC provided technical assistance in survey development and implementation. Descriptive analyses were carried out using SPSS.

Results: Questionnaires were completed by 93% of the hospitals. Of these, 67% reported <500 births/year. The majority of hospitals (64%) have written policies that support breastfeeding and 74% of these specify that breastfeeding be initiated within 1 hour of birth. About half of all hospitals have written procedures for implementing 24-hour-rooming-in (53%). No hospitals routinely provide formula to breastfeeding infants, although formula is provided by physician's special order (86%), at mother's request (77%), or at discretion of the nursing staff (30%). Seventy-seven percent of hospitals provide inpatient breastfeeding assistance to all mothers, 64% only to mothers who choose to breastfeed, and 9% to those who request help. Discharge packs, including formula and formula coupons, are given to breastfeeding mothers in 98% of hospitals, and formula company materials are the most common education resource. Postpartum breastfeeding support includes providing numbers to call for help (84%), referrals to lactation consultants (52%), telephone follow-up after discharge (44%), and hospital-based breastfeeding support groups (20%).

Conclusions: Most Colorado hospitals specify when breastfeeding should be initiated and almost all provide routine breastfeeding assessments. However, over one-third of Colorado hospitals have no breastfeeding policies in place, and almost every hospital distributes formula and formula coupons to breastfeeding mothers.

Public Health Implications: Expansion of practices and policies supportive of breastfeeding is needed in all Colorado hospitals to promote increased breastfeeding. Ongoing surveillance of practices and policies can help target these efforts.

ABSTRACTS

#LB 46 - Poster Session

A MARKETING MODEL FOR IMPROVING PERINATAL HEALTH OUTCOMES

Leah T. Smith, MPH

Background: A perinatal health status needs assessment for Georgia's South Central Perinatal Region, Region 6, was conducted for the years 1994 to 1999 for Georgia Public Health Districts Macon, Dublin, and Valdosta. The needs assessment revealed high infant mortality rates, high percent of low birth weight births, and high numbers of preterm births in the region. Lifestyle PRIZM clusters were utilized for developing a marketing/business model to promote prevention programs.

Methodology: An Infant Health Risk Score was created for each county and census tract by calculating the z-scores of various Medical, Lifestyle, and Access variables. The scores indicated the areas in the region that are at high risk for certain medical, lifestyle and access variables (i.e. high risk for preterm births, low education levels, and poor access to perinatal services). A marketing tool, Claritas PRIZM Clusters, was used to identify a specific cluster and associated marketing information for each census tract within the region.

Results: The Infant Health Risk Scores were linked with the PRIZM cluster marketing data to target areas in the region that exhibit high risk medical, lifestyle, and access scores with health promotion and disease prevention strategies. Specific media usage and consumer behavior patterns were processed for every high risk area in the region. The categories for media usage are television, radio, and magazines and the categories for consumer behavior include restaurants, food items, and shopping locations.

Conclusions: The South Central Perinatal Region Planning Committee is developing strategies to implement the media usage and consumer behavior marketing information to focus their prevention efforts to the high risk areas in the region.

Implications for Practice: Linking marketing tools with a health status needs assessment greatly improves the planning and focus of prevention efforts.

ABSTRACTS

#LB 49 - Poster Session

SYPHILIS INFECTION AROUND THE TIME OF PREGNANCY.

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Background: Syphilis infections are related to adverse pregnancy outcomes, such as stillbirth, low birthweight, conjunctivitis, pneumonia, neurological damage and congenital abnormalities. Missouri state statute mandates that pregnant women be tested for syphilis, preferably during their first trimester, and the results are reported to the state's sexually transmitted diseases (STD) database. This study evaluated characteristics associated with syphilis infection around the time of pregnancy.

Methods: We examined maternal characteristics (i.e., age, race, education, smoking, and prenatal care) in relation to syphilis infection around the time of pregnancy, using the STD data linked to livebirth, and fetal and infant death certificates. We used categorical data analysis techniques, including logistic regression, to evaluate the associations and to control for confounding.

Results: Of the 75,269 Missouri infants born in 1999, 69 mothers, or 9.2 per 10,000, had a syphilis infection diagnosis between 1997 and 1999. After controlling for confounding by other risk factors, African-American women were more than 13 times as likely to have a syphilis infection as white women [adjusted odds ratio (aOR) = 13.4, 95% confidence interval (CI): 7.5 - 24.2); women with 0-8 (aOR = 9.2, 95% CI: 1.9 - 43.9) and 9-11 (aOR = 5.7, 95% CI: 1.6 - 20.8) years of education were also at increased risk.

Conclusion: African-American women and women with fewer than 12 years of education are at significantly increased risk for syphilis infection around the time of pregnancy.

Public Health Implications: Preventive measures of syphilis infection around the time of pregnancy should be targeted towards minority women and women with few years of formal education.

ABSTRACTS

#LB 50 - Session C2

FACTORS ASSOCIATED WITH REPORTING A DENTAL PROBLEM AND NOT SEEKING DENTAL CARE DURING PREGNANCY PRAMS RESPONDENTS IN LOUISIANA - 1998, 1999, 2000

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Background: Healthy People 2010 (HP2010) has set a target of 56% for annual use of the oral health care system (baseline 44%) for the general population. Education about oral health usually occurs in dental offices, but could also be provided in other settings. Little is known about the factors that influence dental care utilization or receipt of oral health education during pregnancy.

Methods: Louisiana's 1998-2000 PRAMS surveys included three No/yes oral health questions (I needed to see a dentist for a problem, I went to a dentist or dental clinic, A dental or other health care worker talked with me about how to care for my teeth and gums). The survey is mailed to women with a recent live birth and asks questions about that pregnancy. We identified predictors of reporting a dental problem during pregnancy, and predictors of not reporting a dental visit among those reporting a dental problem using multivariate logistic regression.

Results: Of all respondents (n=7031), 27% reported having a dental problem during pregnancy, 70% reported not visiting a dentist during pregnancy, and 65% did not recall having been talked to about oral health. Of the women who reported a dental problem, 50% reported not seeing a dentist during that pregnancy. Characteristics associated with reporting a dental problem included late prenatal care entry (after first trimester) [OR = 1.19 (1.01, 1.41)], Medicaid (for prenatal care) [OR = 1.47(1.25, 1.72)] and smoking [OR = 1.49(1.28, 1.75)]. Among women who reported a dental problem, predictors of not seeking dental care included education (HS vs. >HS) [OR=1.72 (1.27, 2.32)], black race [OR=1.44 (1.10, 1.88)] and Medicaid [OR = 2.27 (1.65, 3.12)].

Conclusions: Dental care utilization during pregnancy among low income women in Louisiana is below the HP2010 target and baseline, and reported receipt of oral health education is low.

Public Health Implications: These data can serve as a baseline for dental care utilization and receipt of oral health education during pregnancy, should Louisiana extend Medicaid dental benefits to pregnant women. Prenatal care visits present opportunities for oral health education for women who may not visit a dentist during pregnancy.

ABSTRACTS

#LB 54 - Poster Session

FACTORS ASSOCIATED WITH SELF-RATED GENERAL AND DIABETES HEALTH IN OLDER ADOLESCENTS AND YOUNG ADULTS WITH DIABETES

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Background: Late adolescence and early adulthood represent a period of great transition; for patients with diabetes this period represents a particular challenge because health care access is often restricted during this time of life. Self-rated health indicates perceived health status as well as self-efficacy. The aim of this study was to determine which factors are related to self-rated general and diabetes health in older adolescents and young adults whose diabetes was diagnosed at ages 0-17.

Methods: Participants (n=36) in the population-based Chicago Childhood Diabetes Registry, and 43 clinic patients from Children's Hospital of Los Angeles, aged 18-31, were queried about current health status and related variables, on average 10.7 years after diagnosis. Univariate analyses determined associations with self-rated general health and diabetes health status.

Results: Fair/poor health was reported more frequently by African Americans and those from Chicago; sex and duration of diabetes were NOT associated with self-rated general or diabetes health. Having public or no health insurance (compared with privately insured) and seeing a general or adult practitioner compared to a pediatrician, were related to worse self-rated health. Clinical factors related to diabetes health included HbA_{1C} and total cholesterol levels.

	Diabetes Health		General Health	
	Fair/Poor	*Exc/Good*	*Fair/Poor*	*Exc/Good*
African Americans, %	75.0**	30.9	75.0**	33.9
Chicago %	66.7**	36.4	70.0**	37.3
Public/no insurance, %	56.5***	23.1	50.0*	28.1
General or adult MD, %	57.1**	31.5	61.1**	31.6
HbA1c, mean (SD)	10.1 (2.0)***	7.8 (1.6)	9.9 (2.2)***	8.1(1.8)
BMI, mean (SD)	27.2 (6.2)	25.5 (4.5)	27.7 (6.4)*	25.4 (4.4)
Cholesterol mg/dL, mean(SD)	209 (62)*	173 (45)	224 (85)**	172 (39)

* p<0.10; **p<0.05; ***p<0.01

Conclusions: Type of insurance and physician's practice setting were associated with self-rated health status while the duration of diabetes was not.

Public Health Implications: Access to appropriate health services during the transition to adulthood may be critical in determining positive long-term outcomes for chronically ill youth.

ABSTRACTS

#LB 55 - Poster Session

ASSISTED REPRODUCTIVE TECHNOLOGY (ART) SURVEILLANCE, UNITED STATES – 2001

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Background: ART includes fertility treatments where both eggs and sperm are handled in the laboratory. ART patients are more likely to deliver multiple-birth infants than women who conceive naturally. Multiple births are associated with increased health risks for both mothers and infants. This study presents state-specific data on ART and ART-related multiple births using surveillance data from ART procedures performed in 2001.

Methods: Population-based data on 107,587 ART procedures performed in the U.S. in 2001 were investigated. Multiple births were assessed as: (1) proportion of live-born infants from deliveries of e”2 infants; and (2) proportion of deliveries with e”2 live-born infants (multiple-birth risk). These measures were evaluated with consideration for patient age, type of ART procedure, number of embryos transferred, and patient state of residence.

Results: Of 40,687 infants born through ART procedures performed in 2001, 53.4% were born in multiple-birth deliveries; this compares with 3% in the general U.S. population during the same period. The average multiple-birth risk for the most common type of ART procedure, using freshly fertilized embryos from the patient’s eggs, was 35.8%. This rate varied from 39.7% among women aged <35 years to 14.4% among women aged >42 years. The multiple-birth risk was higher when donor eggs were used and lower when thawed embryos were used. For ART procedures using freshly fertilized embryos from the patient’s eggs, the multiple-birth risk increased when e”2 embryos were transferred. However, number of embryos available (an indicator of embryo quality) was also a strong predictor of multiple-birth risk independent of number of embryos transferred. The percentage of infants born in multiple-birth deliveries was >50% in the majority of states. California (2,673), New York (2,353), and Massachusetts (1,399) reported the highest number of infants born from multiple-birth deliveries. These states also reported the highest number of ART procedures, live-birth deliveries and infants resulting from ART.

Conclusions: ART-related multiple births are an important public health concern nationally and in many states. Further work is needed to understand the effect of ART on maternal and child health.

Public Health Implications: Data in this study indicate a need to reduce ART-related multiple births.

ABSTRACTS

#LB 56 - Poster Session

PREGNANCY-RELATED MORTALITY IN THE UNITED STATES: ETHNIC DISPARITIES IN AFRICAN-AMERICANS AND HISPANIC-AMERICANS, 1993-1999

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Background: Pregnancy-related (PR) mortality is the reproductive health indicator with the widest ethnic disparities in the United States. Established risk factors for pregnancy-related mortality include age >35 years, delayed prenatal care, low educational level, and high birth order. The authors used data from the CDC's Pregnancy Mortality Surveillance System (PMSS) to examine the overall disparity between African-American and Hispanic-American women by selected demographic and medical characteristics.

Methods: Using death certificates and linked birth/fetal death certificates data from PMSS (1993-1999), pregnancy-related mortality ratios (PRMRs-defined as the number of pregnancy-related deaths per 100,000 live births) were analyzed and compared between African-American and Hispanic-American women. Risk factors examined included age, educational level, obstetric cause of death, prenatal care, and gestational age.

Results: A total of 3,337 pregnancy-related deaths were reported to PMSS for 1993-1999. The number of PR-deaths attributable to African-American and Hispanic-American women were 1,176 (35.2%) and 163 (4.9%), respectively. The three leading causes of death in both ethnic groups were embolism, hemorrhage, and pregnancy-induced hypertension. The overall PRMR for African-American women was approximately four times as high as that of Hispanic-American women (30.8 vs. 8.6 deaths per 100,000 live births). The largest disparities in PRMR by age occurred in the 20-24 (RR=3.94) and >39 (RR=2.09) age cohorts. Among women with >12 years of education, African-American women were nearly four times more likely to die of PR-causes than Hispanic-American women (RR=3.7). Even among women who received first-trimester prenatal care, African-American women were approximately three times more likely to die from PR-causes (14.9 vs. 5.9).

Conclusions: Within the ethnic minority population, African-American women are disproportionately impacted by pregnancy-related mortality compared to Hispanic-American women. Additional research is needed in understanding the role of preexisting medical conditions in predisposing certain ethnic groups to higher risks of dying from PR-complications. Improved quality of prenatal care and early diagnosis of complications are possible instruments through which this effort can be realized.

ABSTRACTS

#LB 58 - Session B2

EXAMINING THE EFFECT OF PATIENT, PHYSICIAN, AND HOSPITAL CHARACTERISTICS ON MATERNITY LENGTH OF STAY USING LOGISTIC REGRESSION AND MULTILEVEL MODELING STATISTICAL TECHNIQUES

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Background. Over the last decade there has been a growing body of Maternal and Child Health research concerned with examining the impact of ecological factors on individual outcomes. These methods often use traditional statistical techniques to model data that may exist in a hierarchical structure. For example, patients nested within physicians, further nested within hospitals. Ignoring the structure of the data may inflate statistical significance and associations between higher levels of the hierarchy and outcomes.

Methods. Hierarchical generalized linear models (HGLM) and logistic regression models were used to examine maternity length of stay for vaginal deliveries. The design includes a data linking methodology using four sources of data: 1998 Arizona hospital discharge summary data, 1998 Arizona birth certificate data, 1998 Arizona board of medical examiner's data, and 1998 Arizona American Hospital Association data. Comparative models were developed to examine the statistical significance of the effect of patient-level characteristics, physician-level characteristics, and hospital-level characteristics on maternity length of stay.

Results. The statistical significance of the effect of patient-level characteristics on maternity length of stay was similar between the logistic regression model and the 3-level hierarchical generalized linear model. The statistical significance of the effect of physician-level and hospital-level characteristics on maternity length of stay differed between the two statistical models. Unmeasured physician-level and hospital-level characteristics accounted for approximately 12% of the unexplained variation when using multilevel modeling. In comparison, the logistic regression model assumes all of the unexplained variation exists at the patient-level.

Conclusions. Ignoring the hierarchical structure of the data may result in a type I error. The logistic regression models inflate statistical significance for the effects of characteristics measured at the physician-level and hospital-level as compared to the level of significance demonstrated by the hierarchical linear generalized models.

Public Health Implications. Using multilevel modeling to examine the effect of ecological characteristics on individual outcomes is increasingly recognized as the preferred methodology as compared to more traditional statistical techniques. The advancement of this area requires continued attention to research design so that public health interventions and policies are guided by rigorous scientific methods verses methods leading to potentially erroneous conclusions.

ABSTRACTS

#LB 59 - Session A1

TRENDS IN CONTRACEPTIVE USE AMONG U.S. HIGH SCHOOL STUDENTS IN THE 1990s.

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Background: Teen pregnancy in the United States declined steadily during the 1990s, as a result of delay in initiation of intercourse and improved contraceptive use. We used national data to examine changes in contraceptive use patterns among high school students during this period.

Methods: We used national Youth Risk Behavior Surveys to estimate trends in contraceptive use (including dual use of a condom and other method) at last sexual intercourse among high school students between 1991 and 2001. We used published, method-specific, race/ethnicity-specific contraceptive failure rates developed from the National Survey of Family Growth to calculate weighted-average contraceptive failure rates (WACFR), indicators that summarize the effectiveness of overall contraceptive use for populations with different patterns of method use. We then examined trends in these indicators by sex, grade, and race/ethnicity and used weighted least-squares regression to test change in these trends.

Results: Between 1991 and 2001, contraceptive use improved for girls but not boys, with annual rates of
change in the WACFR of -1.5% (95% CI -2.5, -0.6) and -1.0% (95% CI –2.1, 0.2), respectively. The largest improvements occurred among 9th graders and non-Hispanic black girls. Reasons for the improvement among girls between 1991 and 2001 included declines in use of withdrawal (from 19.1% to 12.8%) and no method (17.6% to 14.1%) and an increase in condom use (38.1% to 51.5%). Overall use of hormonal methods among girls changed little during this time, because a decline in oral contraceptive use (from 24.9% to 20.8%) was offset by an increase in injectable contraception use (5.7% in 2001). Dual use (condoms plus a hormonal method) among girls was 7.4% in 2001. Based on the WACFR index, in 2001 almost one quarter of sexually active teens would have been expected to become pregnant with a year.

Conclusions: Although contraceptive failure among teens is common, these data demonstrate significant improvement in contraceptive practice among high school-aged teens during the 1990s.

ABSTRACTS

#LB 60 - Session A5

SATISFACTION WITH CARE: DOES IT IMPROVE IMMUNIZATION OF YOUNG CHILDREN?

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Background: Parental satisfaction with their child's health care may be an especially important measure of quality given the limited availability of health outcome measures for children. Few studies have examined the relation between parental satisfaction with care and child health care utilization. The present study sought to prospectively evaluate the impact of parental satisfaction with care on childhood immunization.

Methods: Data were from the 1996 longitudinal cohort study of the Healthy Steps for Young Children Program, an experimental evaluation of a practice-based developmental intervention consisting of extended well-child visits and several home visits in the first three years of life. Parental satisfaction with their child's overall health care was assessed at 2-4 months for 4753 children. Parents were asked to rate their child's health care as excellent, good, fair, or poor. Logistic regression models, controlling for a variety of sociodemographic and health care utilization variables, served to assess the effect of parental satisfaction on the immunization measures of age-appropriate DTP1, DTP3, and MMR vaccination and up-to-date DTP, Polio, and MMR by 24 months.

Results: The majority of parents were satisfied with their child's health care. Only 4% of parents rated their child's overall care as fair or poor. Children whose parents reported fair/poor care were less likely to receive age-appropriate DTP1, DTP3, and MMR vaccination and to complete the DTP, Polio, and MMR series by 24 months, independent of sociodemographic characteristics and design features (OR range 0.47-0.65, $p<.05$). The effect of fair/poor satisfaction appeared to be mediated by inadequate well-child utilization.

Conclusions: Parental satisfaction was predictive of timely vaccination. Moreover, our global measure was correlated with more specific measures of satisfaction with care that were not more strongly related to immunization. Use of a global measure of satisfaction with care may be efficient and helpful in determining parents who are less likely to seek adequate preventive care for their children.

Public Health Implications: Given its relation to the receipt of a valuable preventive service, providers should take steps to measure and improve parental satisfaction as part of a quality improvement strategy.

ABSTRACTS

#LB 63 - Session E6

RISK OF BIRTH INJURIES ASSOCIATED WITH UNASSISTED AND ASSISTED VAGINAL DELIVERY COMPARED TO CESAREAN SECTIONS

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Background: Assisted vaginal delivery occurs when a baby is delivered with the use of forceps or vacuum extraction. Prior research has shown that infants delivered by assisted vaginal delivery may be more likely to sustain major injuries than those delivered spontaneously. This population-based case-control study examined the increased risk of birth injuries/traumas in deliveries assisted with vacuum extraction or forceps or unassisted (vaginal delivery or vaginal delivery after previous cesarean section) compared to all cesarean section (primary elective, emergency, or repeat).

Methods: Missouri birth certificate data were used to obtain 2,558 of birth injury and 2,558 controls between 1989-1999. Logistic regression analysis was conducted to calculate odds ratios and appropriately adjust for confounders.

Results: Unassisted vaginal delivery (adjusted odds ratio (aOR) 1.6, 95% confidence interval (CI) 1.4-2.0) and vacuum extraction (aOR 3.8, CI 2.2-6.7) increased the risk of birth injury, but forceps delivered babies had the greatest risk for birth injury compared to cesarean sections (aOR 11.0, CI 6.9-17.6). Level of hospital care, birth weight, and labor complications (fetal distress, premature rupture of membranes, and dysfunctional labor) were significant risk factors for birth injury in the assisted and unassisted vaginal deliveries. Race and high-risk pregnancy did not confound the association between birth injury and assisted or unassisted vaginal delivery.

Conclusion: There was a strong magnitude of association and statistical significance between birth trauma
and method of delivery, when adjusted for confounders. There was a higher risk of birth injury when operative vaginal delivery was performed compared to unassisted vaginal delivery using C-section as the reference population.

Public Health Implications: The recognition of these risk factors will help physicians provide recommendations for the most beneficial delivery process.

ABSTRACTS

#LB 64 - Session D3

ADEQUACY OF PRENATAL CARE AMONG MEXICAN WOMEN IN OREGON, 2000

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Background: In some locations, Hispanic women have barriers to receiving adequate prenatal care. Oregon has a program (CAWEM) to provide Medicaid insurance for delivery to undocumented women. We sought to explore barriers to initiation and adequacy of prenatal care among Mexican women giving birth in Oregon.

Methods: Oregon 2000 birth certificates were linked with Medicaid claims data. Mexican women were either born in Mexico or Mexican-descent women born in the United States. Oregon 2000 PRAMS was the source of data on barriers to prenatal care. Adequacy of prenatal care was assessed using Kotelchuck's APNCU Index on birth certificate data.

Results: 6816 women of Mexican descent gave birth in Oregon in 2000. 4987 were foreign-born Mexican [including 2801 women who were enrolled in the CAWEM program] and 1803 were US-born Mexican. Among Mexican women birthing in Oregon, risk factors for inadequate prenatal care were: urban residence [(compared to non-urban), OR 1.75, 95% CI 1.56, 2.00]; foreign-born maternal nativity [(compared to native-born), OR 1.64, 95% CI 1.28, 1.89]; Medicaid enrollment [(compared to not Medicaid), OR 1.49; 95% CI 1.28, 1.75]; and CAWEM coverage [(compared to no CAWEM coverage, OR 1.32, 95% CI 1.14, 1.54]. Among the 260 Mexican PRAMS respondents, the most common barriers to initiation of prenatal care were inability to get appointment sooner (16.2%), insufficient money (10.8%) and lack of insurance (9.2%).

Conclusions: The Mexican women with the least adequate prenatal care were urban, foreign-born and Medicaid-insured. Access problems (getting an appointment, lack of money or insurance) were barriers to initiation of prenatal care.

Public Health Implications: In Oregon there is a need to improve access to prenatal care for Mexican women, especially urban, foreign-born and/or Medicaid-insured women.

ABSTRACTS

#LB 65 - Session C2

DENTAL CARE DURING PREGNANCY: OREGON 2000

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Little is known about the use of dental services during pregnancy. Research suggests that a woman's oral health may impact birth outcomes.

To obtain information on dental care during pregnancy, questions were added to Oregon's Pregnancy Risk Assessment Monitoring System (PRAMS), a survey of maternal behaviors and experience before, during and shortly after pregnancy. A stratified random sample of mothers (n=2,950) were asked whether, during their pregnancy, they needed to see a dentist for a problem, whether they went to a dentist, and whether a healthcare provider talked with them about the importance of seeing a dentist.

The overall response rate for PRAMS was 73.1%. Forty-three percent of the women reported going to a dentist and 27.6% reported that they needed to see a dentist for a problem. Of the women who reported needing to see a dentist, only 59.6% went to a dentist. In multivariate analysis, among women who said they needed to see a dentist during their pregnancy, those most likely to not see a dentist had unintended pregnancies (ORa=1.72; 95% CI 0.87-3.45), annual family income <$30,000 (1.33; 0.57-3.13), and were enrolled in WIC (1.35; 0.60-3.03). A healthcare provider talked to 30.6% of the women about the importance of seeing a dentist during pregnancy.

The majority of Oregon women did not see a dentist and few received information on the importance of seeing a dentist during pregnancy. Efforts need to be made to educate both women and healthcare providers on the importance of dental care during pregnancy.

Learning Objectives: At the conclusion of the session, the participant will be able to: describe the oral health component of Oregon PRAMS, list the risk factors associated with the failure to access dental care during pregnancy, and list the risk factors associated with oral health problems during pregnancy.

ABSTRACTS